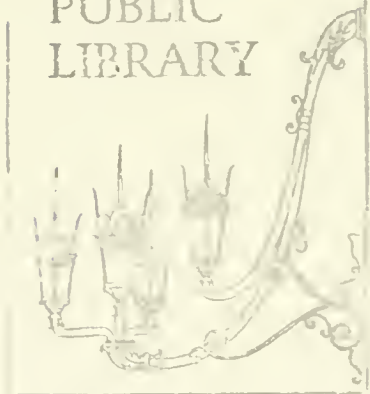



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MAY 1989

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I. Summary

The proposed Boston Science Center project, located at 301 Southamptton Street in South Boston, Massachusetts, consists of two (2) research facilities which will serve Boston's medical services community. The Proposed Project, as revised, contains a total of 612,090 square feet of biomedical laboratory and related office space; 118,150 square feet of mechanical equipment space and 233,200 square feet of structured parking, which will accommodate 626 automobiles. One level of parking will be below ground level and two levels will be at or above-grade below the research space.

The 5.4-acre site is bounded by the SE Expressway (I-93) to the east, the Sears Distribution Center to the south, the New York/New Haven and Hartford Railroad to the west and Southamptton Street and an access ramp to the north (See Figure 1). The site is enclosed by an existing 8-foot perimeter fence.

PROPONENT

Southmed Limited Partnership, in care of Congress Group Ventures, Inc.

DOCUMENT STATUS

This document represents a combined BRA Final Project Impact Report (FPIR) and MEPA Final Environmental Impact Report (FEIR). The EOEa document number is 7111R.

ORGANIZATION OF THE FPIR/FEIR

The FPIR/FEIR for the Boston Science Center Project is presented here as a single document which addresses both the comments of the Boston Redevelopment Authority (BRA) and the Secretary of Environmental Affairs on the previously submitted DPIR/DEIR, as well as the comments of other public agencies. This initial chapter contains general project information, including a description of the Proposed Project as revised, a comparison of the current plan to the previous proposal which was analyzed in the DPIR/DEIR, a summary of environmental effects and a discussion of the Proponent's commitment to mitigation.

Chapters II-IV contain all comment letters received in response to the Draft PIR/EIR. For each comment letter the chapters include the following:



A copy of the original letter. Principal comments are highlighted with sequential numbers in the left-hand column.

A summary of the principal comments found in each letter. This is provided as a convenient reference to, rather than as a substitute for, the original comment.

A response to each summarized comment. Each response is numerically keyed to corresponding letters and comments. In reading the response, it may be helpful to reference the accompanying original letter in order to understand the full range of issues being addressed.

Chapter V, Appendices, includes all BRA and MEPA documents, a distribution list as well as technical material which supplements the discussion of the environmental issues raised in the various comment letters.

PROJECT DEVELOPMENT

As a result of comments made by various agencies concerning the site plan, as well as by the Boston Redevelopment Authority concerning the building design as proposed in the DPIR/DEIR, revisions have been made to the Boston Science Center Project. These revisions are presented in this FPIR/FEIR as the Proposed Project.

The Proposed Project, as revised, will consist of approximately the same amount of biomedical laboratory and accessory space as previously proposed. This space will be distributed unequally, between two buildings of contrasting, but complimentary shape, size and building material (See Figure 6). This space had been previously housed in two mirror-image buildings of equal size. The new building shapes provide for substantial reduction in average building height due to the broadening of each building, which allows one building to drop 32 feet in height.

Site access has been improved by adjusting the location of the entry drive (see Figure 6). In addition, the new plan provides 18 percent more parking to accommodate the projected employee demand. A 4,950 square foot private day care facility has also been added to the project.

Each of these improvements were developed in communication and cooperation with State and City agencies, which commented on the DPIR/DEIR. In addition, the Proponent met with community groups throughout the environmental review process. A list of community meetings held or attended by the Proponent is attached in Appendix D.

PROJECT DESCRIPTION

The Proposed Project consists of two buildings which will be used for biomedical research (see Figure 5). The two buildings will contain a total of 949,515 gross square



Figure 2 - Aerial View Looking North



Figure 3 - Aerial View Looking Northwest

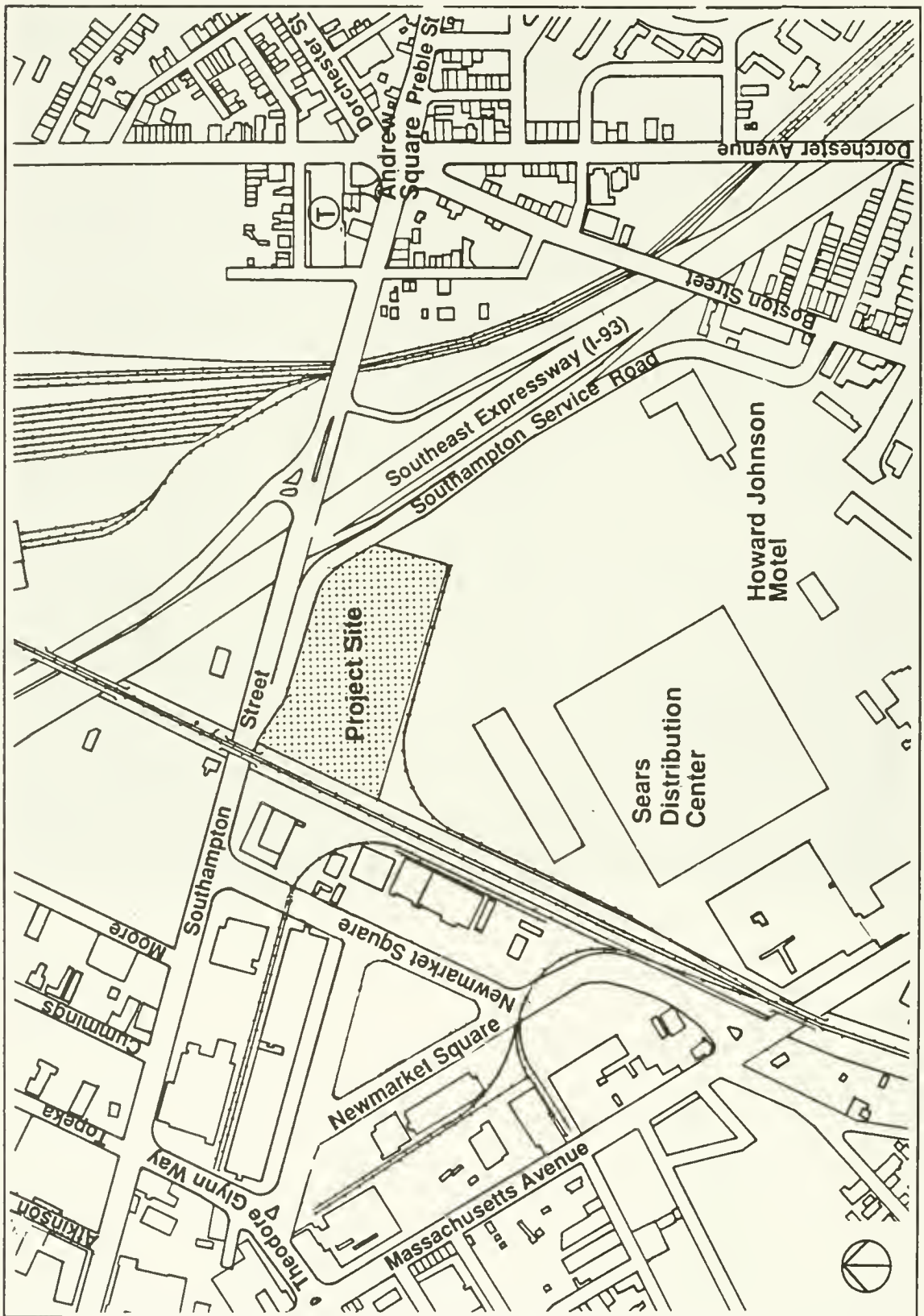


Figure 4 - Project Area Map

feet of space, including parking and mechanical space. Building A will contain approximately 363,765 square feet of research laboratory space, plus 127,250 square feet of parking and 61,250 square feet of mechanical space. Building B will house 248,325 square feet of research laboratory and accessory space, along with 105,950 square feet of parking and 42,975 square feet of mechanical space.

Parking levels will accommodate a total of 626 cars, with 358 located in Building A and 268 located in Building B. Each building will now have three (3) levels of parking; one below grade, one at grade, and one above grade.

The site plan devotes 47 percent to building area and 53 percent to open space. The ground floor plates of the two buildings total 111,700 square feet. The roadways have been patterned after a grid system, and walkways and landscaping will follow the urban orientation which has been established.

The following table summarizes the Proposed Project:

Table 1: General Project Description

Lot area = 237,339 s.f.

Allowable FAR = 2.0

Requested FAR = 2.6

Total Allowable FAR Gross Floor Area = 474,678 s.f. (FAR 2.0)

Proposed Project FAR Gross Floor Area = 612,090 s.f. (FAR 2.6)

Parking Spaces Provided = 626

Parking = 1 space/980 s.f.

<i>Floor Level</i>	<i>Non FAR Gross Floor Area (s.f.)</i>	<i>FAR Gross Floor Area (s.f.)</i>
P-B (parking below grade)	90,125	3,850
P-1 (parking at grade)	94,650	22,000
P-2 (parking above grade)	75,125	0
First	0	100,195
Second	0	95,645
Third	0	97,720
Fourth	0	97,720
Fifth	0	94,545
Sixth	34,675	51,145
Seventh	0	49,270
Mechanical Penthouse	42,850	0
	<hr/>	<hr/>
Total (Both Buildings)	337,425	612,090

Non - FAR floor areas for both buildings include: 86,575 s.f. of parking and 3,550 s.f. of mechanical space on P-B; 75,100 s.f. of parking and 19,550 of mechanical space on P-1; 71,525 s.f. of parking and 3,600 s.f. of mechanical space on P-2; and 77,525 s.f. of mechanical space in the penthouses.



Figure 5 - Proposed Project Site Map

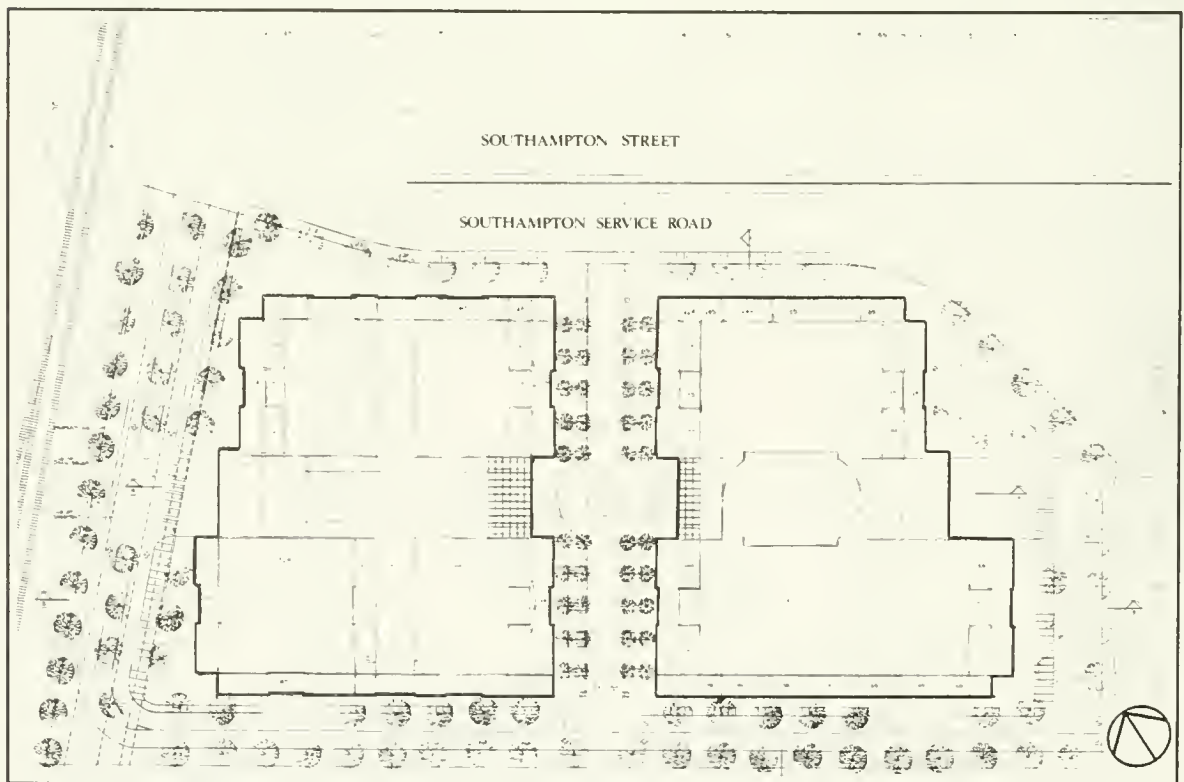


Figure 6 - Proposed Project Site Plan

Common spaces are planned to include: public lobbies, an auditorium, a private daycare facility, a kitchen, and both common and private dining facilities.

PROJECT COMPARISON

The following analysis is made comparing the Proposed Project as revised to the previous proposal which was analyzed in the DEIR/DPIR:

Building Use - the Proposed Project continues to provide for research laboratories as the main use.

Building Program - the Proposed Project will house approximately 610,000 square feet of research and accessory space, as did the previous proposal. Additionally, the Proposed Project as revised will incorporate a private daycare facility of approximately 5,000 square feet, as well as 18 percent more parking spaces than previously proposed.

Building Proportions - the maximum floor plates of the buildings have increased by 9,000 s.f., or about 9 percent, in the current project proposal. This has enabled the building height to be reduced by 32' on the eastern building and 4' on the western building.

Site Planning - the Proposed Project as revised is served by a more grid-like pattern of driveways, as compared to the previous proposal's ring roadway around the site. This has served to reduce the road area within the site by about 20%. Transformers have been relocated within the buildings in the currently proposed project, which opens up the site further. The open space continues to occupy over 50% of the site. However, now that the roadways have been reduced, the open space can be better utilized.

Zoning Relief - as with the previous proposal, a Conditional Use Permit, for a scientific research and teaching laboratory not conducted for profit and accessory to a college or university granting degrees by authority of the Commonwealth of Massachusetts and located in a General Industrial I-2 District, and accessory keeping of laboratory animals incidental to an educational or institutional use is expected to be required for the Boston Science Center, pursuant to Article 8 and Article 6 of the Boston Zoning Code.

A variance under Article 7 of the Boston Zoning Code is required to allow the maximum floor area ratio (FAR) of the Proposed Project site to change from 2.0 to 2.6. There has been no change in the FAR of 2.6 needed for the project, as previously or currently proposed. (Note, however, that the change from the FAR of 3.0 called for in the DPIR/DEIR to an FAR of 2.6, resulted from a clarification by the Department of Inspectional Services of the method of calculating FAR from gross floor area. As a result of this recalculation, the corrected FAR for the previous proposal was 2.6.)

In the Proposed Project, adequate parking is being provided to meet the off-street parking requirements, eliminating the need for a variance under Article 23, as would have been required by the previous proposal.

As with the previous proposal, the current Boston Science Center Project proposal will require Development Impact Project Approval, as specified under Articles 26A and 26B of the Boston Zoning Code as a result of the need for the foregoing zoning relief for the Proposal Project.

All other provisions of the zoning requirements are met by the Proposed Project, including: yard set backs, parapet setbacks and off-street parking requirements. (see Zoning Computation Form and Attachments contained in the Appendix).

The following chart details the foregoing analysis:

Table 2 : Project Comparison

	<i>Proposed Project</i>	<i>Prior Proposal (Draft PIR/EIR)</i>	<i>Difference</i>
<i>Building Use</i>	research lab	research lab	none
<i>Building Program Area</i>	612,090 s.f.	608,755 s.f.	new daycare facility added
<i>Parking</i>	626 spaces	530 spaces	added 18% to meet code
<i>Building Heights</i>	119' and 147'	151'and 151'	18' avg. reduction
<i>Combined Max. Floor Plates</i>	111,700 s.f.	102,975 s.f.	9% increase
<i>Open Space</i>	53%	56%	decrease offset by reduced roadway
FAR	2.6	2.6	no change

SUMMARY OF ENVIRONMENTAL EFFECTS

The following is a summary of the potential environmental impacts associated with the Proposed Project, based on analyses performed for the Draft PIR/EIR as well as any additional analyses required as part of this Final PIR/EIR.

Transportation:

Analysis of the effects of the Proposed Project on traffic operations was presented in the Draft PIR/EIR and has been supplemented in this Final PIR/EIR. This analysis indicates that the greatest impact of the Proposed Project will occur at the intersections of the southbound on-ramp and the northbound on and off ramps of the SE Expressway (I-93) with Southampton Street.

The presently unsignalized intersection of the I-93 southbound entrance ramp service road together with the main site drive, should be signalized. In response to comments from several agencies, the location of the new site drive has been shifted to the west to separate movements at this location and to provide more adequate turning radii for project-related traffic. The Proponent agrees to provide 100% of the costs of the installation of a signal at this location. The Proponent is unable to control the use of the ramp/service road by others for two-way traffic, but the Proposed Project will not add to the northbound traffic approaching Southampton Street on the ramp. The Proponent would support its eventual operation as a one-way southbound ramp, and will take no steps to preclude this in its design.

Similarly, the intersection of Southampton Street and the I-93 northbound ramps at Southampton Street should be signalized, even without the Proposed Project. The Proponent agrees to provide 31% of the costs of installing a signal at this location.

Analysis also indicates that the signalized intersection of the I-93 ramps at Massachusetts Avenue and Melnea Cass Boulevard is currently operating at a failing Level of Service. With minor changes identified in the Draft PIR/EIR, operating conditions will be improved over projected No-Build Conditions. All other locations will experience only minor increases in traffic due to the project and no changes in their operating conditions.

Public transit is expected to account for almost 32% of the project-related trips. This percentage has been increased from the 30% assumed in the Draft PIR/EIR due to a reexamination of the transit share in light of additional transit promotion measures being undertaken by the Proponent. To enhance the attractiveness of public transportation, a shuttle service will operate at a schedule of every 10 minutes in the peak hours, and as-needed between the peak hours.

In response to the BRA letter, a qualitative review of the traffic impact of the revised Boston Science Center site design was conducted. The analysis indicates that the traffic conditions, as mitigated, will be similar to those shown for Option A in the Draft PIR/EIR. A sensitivity analysis of the higher employee density (as suggested by the BRA), a modified building area and a higher mode split as discussed above, produce only slightly higher (24 vehicles) trips in the peak hour. After distributing the traffic among the access routes, it was judged that variations of this small an amount would not change the operating conditions. Parking demand would increase slightly by 65 vehicles under the new design, but it is more than offset by an increase in the parking supply of 96 spaces which also serves to make up for the previous shortfall, and to provide guest spaces.

In response to the BRA and BTB letters, the issue of diversion of SE Expressway traffic to alternate local routes was examined. The qualitative analysis indicated that the SE Expressway, even fully loaded, provides faster travel times than alternate routes; and thus diversion to those routes will not be significant. All other traffic-related issues (truck, taxis, pedestrians) have minor effects.

Wind:

In response to comments from the BRA, a qualitative review of the new Boston Science Center design was conducted. The analysis indicates that the wind flow patterns around the Proposed Project as revised will be similar to those shown for the previous proposal which was described in the Draft PIR/EIR. The wind speed increases predicted to occur may differ slightly due to the difference in building heights between these two design options. The 32 foot lower building height of the east component of the revised plan will marginally reduce the amount of wind downwashed into the courtyard and grade level areas along the north, east and south facades of the building. Therefore, slightly better pedestrian wind conditions can be expected in these areas, than those noted for the previous design.

In the remaining pedestrian areas around the proposed development, pedestrian-level wind conditions are predicted to be similar under either the previous or the Proposed Project, as revised. Included in these areas is the pedestrian route between the development site and Southampton Street, which is situated in the lee of either development option for most wind directions from the southwest and southeast quadrants. As a result, pedestrians walking to and from Andrew Square should find wind conditions better than existing site conditions once the proposed building is constructed. Wind conditions along the Southampton Street sidewalk in the lee of the proposed development are predicted to be suitable for pedestrian activities which are likely to occur in the area.

Shadow:

The shadow impact of the new design for the Boston Science Center is not expected to differ significantly from the Build Condition illustrated in the Draft PIR/EIR. The west component of the Proposed Project as revised is roughly the same mass and height as the Build Condition examined in the Draft PIR/EIR. Only the shift of the cooling tower to the southwest quarter of this component of the development will have a small impact on the shadow conditions. This shift toward the site perimeter will result in slightly more shading of the properties along Newmarket Square and Southampton Street during the morning hours between September 21st and March 21st which is offset in part by the overall 4 foot decrease in building height. On the other hand, the 32 foot reduction in height of the easterly component of the revised plan (when compared to the Build Condition), will result in less shading of Southampton Street, the Service Road and I-93 during the afternoon hours throughout the year.

Air Quality:

Traffic: Results of the traffic-related air quality analysis performed in the Draft PIR/EIR indicate that one- and eight-hour carbon monoxide concentrations are well below the National Ambient Air Quality Standards (NAAQS) and represent acceptable air quality conditions at the sensitive receptors. Modification of the building design and the traffic analysis has had no significant adverse effect on those conditions. Therefore, the Project will not interfere with the Department of Environmental Quality Engineering's (DEQE's) goal of attainment and maintenance of the NAAQS.

Garage: The Proposed Project ,as revised, will provide parking for a total of 626 automobiles. The parking garage will consist of three (3) levels, two at or above-grade and one below-grade. Primarily, natural ventilation is proposed for the at or above-grade levels and mechanical ventilation is proposed for the enclosed level below-grade.

In response to the BRA comment, a qualitative comparison between air quality impacts generated by the new design and those generated by the previous proposal was performed as part of the Final PIR/EIR. Results indicate that while the new design increases the overall parking capacity of the garage by 15 percent, a higher number of vehicles will be parked at or above-grade, which will result in a decrease in carbon monoxide concentrations at downwind-sensitive receptors.

Building Exhausts: As described in the Draft PIR/EIR, the impact of fume hood emissions on ambient air quality will depend on the specific research entity and their activity. However, in response to the BRA letter, a more detailed description of the proposed exhaust system and potential downwash has been provided in the Final PIR/EIR. Appropriate air intake and exhaust separations, stack heights, and flow volumes have been selected based upon a sensitivity analysis of wind wake characteristics, air flow dynamics and safety requirements. Physical modeling will be performed upon tenant selection to determine the impact of emissions from the fume hoods which will

be located in the respective laboratories. This modeling will also confirm the exhaust and air intake locations.

Geotechnical:

The geotechnical assessment performed for the Draft PIR/EIR indicates that construction of the Proposed Project will not significantly affect groundwater levels in the area. Based on observed groundwater levels and the relative locations and nature of buildings and utilities around the site, it is believed that during construction, temporary lowering of groundwater levels outside the site will be minimal and will not adversely affect existing buildings or other facilities. To avoid long-term groundwater lowering, permanent building underdrains or foundation drains will not be used. The below-grade portion of the building will be designed to resist hydrostatic pressures.

Building foundation piles will be installed by driving from within the general excavation area. Existing piles will be worked around whenever possible, so that a minimum of piles will require removal. Vibrations and noise associated with pile driving are not expected to be significant outside site limits. Heaving of the ground surface will occur near the piles due to volume displacement of soil. Ground heaves due to pile installation and selected pile removal are not anticipated to be significant outside the site.

Hazardous Materials:

As described in the Draft PIR/EIR, the release of both petroleum products and friable asbestos occurred at the site prior to its acquisition by the Proponent, both of which were removed to the satisfaction of the Massachusetts Department of Environmental Quality Engineering (DEQE). In addition, the Proponent has removed a pre-existing PCB-contaminated transformer and soil found on the site, after notification to DEQE and in compliance with DEQE requirements.

The project is likely to generate solid wastes consistent with similar scientific research facilities. Waste produced at the Boston Science Center will be managed and disposed of, by the individual project tenants, in full compliance with federal, state and local laws and regulations. Furthermore, compliance with applicable laws will be a requirement of each lease.

Construction:

Project construction is estimated to begin in late summer of 1989 and be completed in 24 to 30 months, barring any unusual circumstances. Demolition began in November 1988 and is nearing completion.

As described in the Draft PIR/EIR, construction activity will generate temporary increases in carbon monoxide and hydrocarbon exhaust emissions. However, it is anticipated that direct emissions from construction equipment will be insignificant. The main generator of noise during project construction will be trucking, which is a short-term and temporary condition. Building foundation piles will be installed by driving

from within the general excavation area. Vibrations and noise associated with pile driving are not expected to be significant outside the site limits. The maximum number of workers on-site during the peak construction activity period is estimated to be 500, of which one-half are projected to be Boston residents, as a goal.

Rodent Control:

A rodent control program was initiated prior to demolition of the pre-existing building. As required by the Department of Inspectional Services, an inspection of the property was made to ensure that proper rodent control measures had been taken prior to the issuance of a demolition permit in November 1988.

In response to the BRA comments, additional information on the specifics of the rodent control program has been provided in the Final PIR/EIR. This includes more detailed information on the pest control contractor and procedural matters related to site inspection and use of proposed rodenticides.

Urban Design:

The area surrounding the project site is characterized by low-rise manufacturing, industrial, and warehousing buildings which are strictly utilitarian in design, bear no functional relationship to one another and present no coherent streetscape. The Proposed Project will generate a positive momentum within this urban design context which will serve as a precedent for future development in the area.

The Proposed Project, as revised, has been refined in response to several key urban design issues raised by the BRA. As opposed to the symmetrical scheme presented in the Draft PIR/EIR, The Proposed Project is now asymmetrical in plan, section and in elevation, providing two distinctly different yet complimentary building forms.

In order to further reduce the impression of mass and create an architecture that is compatible with the scale of the city of Boston, the current proposal calls for two H-shaped buildings of differing floor plate sizes. Each building is comprised of two wings and a recessed bridge which creates the affect of four masses on the site. This affect is further reinforced by varying the heights of the buildings, a move that also responds to the abutting elevated railway embankment with a higher western component and a lower eastern component. Facade treatments, including materials and fenestration, continue the asymmetry between the buildings.

The site plan for the Proposed Project modifies the roadway concept to create a more grid-like street pattern which replaces the ring road of the original plan. This grid-like street pattern represents an important first step in establishing an urban street character for the area. This character is further reinforced by the creation of a cul-de-sac between the two buildings that serves as a vehicular front door to the buildings and a pedestrian way out to Southampton Street.

As a result, the proposed project will dramatically enhance the visual environment of the community by transforming an abandoned industrial site into an attractive and vital workplace. Not only will the buildings, themselves, contribute aesthetically to the environment, but the open space surrounding the buildings will form the kind of urban greenspace not currently present in the vicinity. This quality environment is intended to establish a pattern for the character of future improvement and investment in this community.

Electrical, Energy and Telephone Service:

As described in the Draft PIR/EIR, the annual energy consumption for the Proposed Project is estimated to be approximately 240,000 BTU per square foot per year.

Electric and gas load demands were developed at a conceptual design level. These loads were discussed with the Boston Edison Company and the Boston Gas Company regarding impact on their distribution systems. Both utility companies stated that the electric distribution system and the gas distribution system could adequately service the Proposed Project.

In response to the BRA comments, additional information on electrical service has been provided in the Final PIR/EIR. This includes a discussion of such items as emergency generators, fire alarm system connections and special provisions for potential tenants.

Sewer and Water Service:

Wastewater: As reported in the Draft PIR/EIR, it is estimated that the Proposed Project will generate approximately 62,800 gpd of sewage. Analysis and consultation with the Boston Water and Sewer Commission indicates that there is sufficient hydraulic capacity to accommodate project-related sewage flows.

Stormwater: Since the project site has been fully covered with impervious surfaces, the Project will not result in increased stormwater runoff.

Water: As described in the Draft PIR/EIR, the Proposed Project is projected to require approximately 69,080 gpd of water. In addition, water consumption resulting from air conditioning and refrigeration is estimated to total an average of 26,250 gpd annually and 135,000 gpd peak. Analysis and consultation with the Boston Water and Sewer Commission indicates that the existing 16-inch main has sufficient capacity to meet the peak water demands generated by the Project, including fire flow requirements.

In response to the BRA comments, additional information has been provided in the Final PIR/EIR on the accommodation of projected water demands. Analysis indicates that a separate domestic water and fire service line will be extended to the buildings from the 16-inch public water distribution system. A central domestic water pumping system will receive the service from the site distribution and provide adequate pressure and capacity for distribution of cold and hot water throughout the buildings. The plumbing systems in the building will incorporate water conservation devices in lavato-

ries, showers, water closets, and dishwashers to minimize water consumption in the buildings and reduce the impact on distribution and collection systems serving the site. Fire service will also be received at the buildings by a central electric or diesel-driven fire pump system. Both the domestic water demand and emergency fire flow requirements will not impact the capacity of the 16-inch public water main.

PROPONENT'S COMMITMENT TO MITIGATION

The following is a summary of mitigation measures which the Proponent will utilize in order to minimize any adverse environmental effects associated with the Boston Science Center Project. For mitigation that requires action by public agencies, the Proponent is committed to working cooperatively with the appropriate agencies to achieve these objectives.

Transportation:

- Installation of a traffic signal at the Southampton Street/Southeast Expressway northbound ramp intersection. The Proponent has agreed to provide 31% of the costs associated with installing a signal at this location.
- Installation of a traffic signal at the Southampton Street/Southeast Expressway southbound ramp and service road/ site drive intersection. The Proponent has agreed to provide 100% of the costs associated with installing a signal at this location.
- Provision of a shuttle bus service, operating at a schedule of every 10 minutes in the peak hours and as-needed between park hours, between Andrew Station and the site to increase the convenience of transit use.
- Participation with CARAVAN in establishing a facility-wide car-pool/van-pool matching service. The project will provide 6 parking spaces for van-pools and 20 parking spaces for car-pools.
- Appointment of a transportation coordinator who will make available to all tenants and employees information on transit routes, schedules and fare rates.
- Tenants will be encouraged to consider implementing flex-time work hours and employer-subsidized transit passes.

Wind:

- Construction of the Proposed Project will improve wind conditions on Southampton Street immediately north of the site.

-
- Design of recessed entries between the buildings will help control pedestrian-level winds.
 - Use of landscaping in the area between the sidewalk and the buildings will help minimize wind impacts at the northwest corner of the Proposed Project.

Shadow:

- The reduced overall building heights will serve to minimize shadow effects, especially in principal pedestrian areas, including Southampton Street.

Air Quality:

- Implementation of traffic mitigation, designed to reduce traffic volumes and congestion, will also help improve local air quality conditions.
- Fume hood exhaust systems will be designed in full compliance with local building code requirements, as well as state and federal regulations. Compliance with local building code requirements will be a part of leases for the Boston Science Center.

Geotechnical:

- Specific performance criteria will be imposed on the contractor pertaining to excavation, dewatering and foundation construction. The criteria will require maintenance of pre-construction ground-water levels outside the site, and will limit ground movements due to pile installation and other activities. The specifications will include provisions for stopping work and/or undertaking remedial measures if ground movements or groundwater drawdown exceeds the criteria.
- Prior to beginning work the contractor will be required to submit shop drawings and calculations which indicate the proposed procedures, for review and approval.

Hazardous Materials:

- All project-related solid wastes will be managed and disposed of in full compliance with Federal, State and Local laws and regulations, with compliance a pre-condition to leasing space in the new development.
- Design of a separate elevator and loading bay isolated from the public in

each building will accommodate the safe handling and disposal of biomedical wastes.

Construction:

- Mechanical, non-explosive demolition techniques were used to remove existing buildings.
- Inspection of all construction equipment to ensure that noise mufflers are in place and in proper operating condition.
- Exposed site surfaces will be wetted on a regular basis to minimize dust.
- Location of aggregate storage piles away from Southampton Street in order to minimize impact on areas of pedestrian activity.
- Coverage of delivery trucks carrying loose materials in order to minimize spills. Southampton Street and its adjacent sidewalk will be cleaned regularly.
- Specific performance criteria will be imposed on the contractor pertaining to excavation, dewatering and foundation construction. The criteria will require maintenance of pre-construction ground-water levels outside the site, and will limit ground movements due to pile installation and other activities.
- Scheduling of typical construction hours between 7:00 AM and 3:30 PM in order to minimize travel during peak commuting hours.
- Use of a construction fence surrounding the site in order to partition such areas from pedestrian activity or surrounding land uses.
- Proper disposal of all demolition/construction waste by licensed haulers, in accordance with all pertinent State and City regulations.

Rodent Control:

- A rodent control program was executed prior to demolition of the pre-existing structures on the site.
- Development of a rodent control program with a certified pest control contractor to prevent reinfestation.
- All rodenticides proposed to be administered will be registered with the United States Environmental Protection Agency and the Commonwealth of Massachusetts.

-
- Material Safety Data Sheets of all rodenticides will be submitted to the Proponent and kept on file at the site.
 - Rodent control inspections and treatments will take place monthly during construction. A final inspection will be conducted at the completion of the project.

Urban Design:

- Segmentation of the building into two individual parts, along with reduced overall building heights, will serve to diminish the overall impact of its mass on the surrounding area.
- Design of recessed entries between the buildings will help control pedestrian-level winds as well as increase the amount of light in principal pedestrian areas.

Infrastructure:

Electricity, Energy and Telephone Service

- Insulation of wall areas with an average R value of approximately 13.
- Insulation of roof and exposed floor areas with an average R value of 17.
- Use of insulated glass windows.
- Use of electrical centrifugal refrigerator machine at 0.60 to 0.70 KW/ton electrical input.
- Use of fan-powered variable air volume heating and cooling systems to provide local climate control on demand.
- Use of "variable speed" controls for all primary air conditioning units in order to directly match local heating and cooling demands.
- Use of high-efficiency motors to drive all mechanical equipment.
- Design of lighting system which utilizes energy-efficient lamps and ballasts.
- Insulation of all chilled water system components.
- Insulation of all hot water system components.

Sewer and Water Service:

- The design and construction of the plumbing systems in the buildings will incorporate water conservation devices in lavatories, showers, water closets, dishwashers, etc. to minimize water consumption in the building and reduce the impact on distribution and collection systems serving the site.
- Design of all building systems and service connections will be coordinated with all of the appropriate public agencies, including the Boston Water and Sewer Commission and the Massachusetts Water Resources Authority.

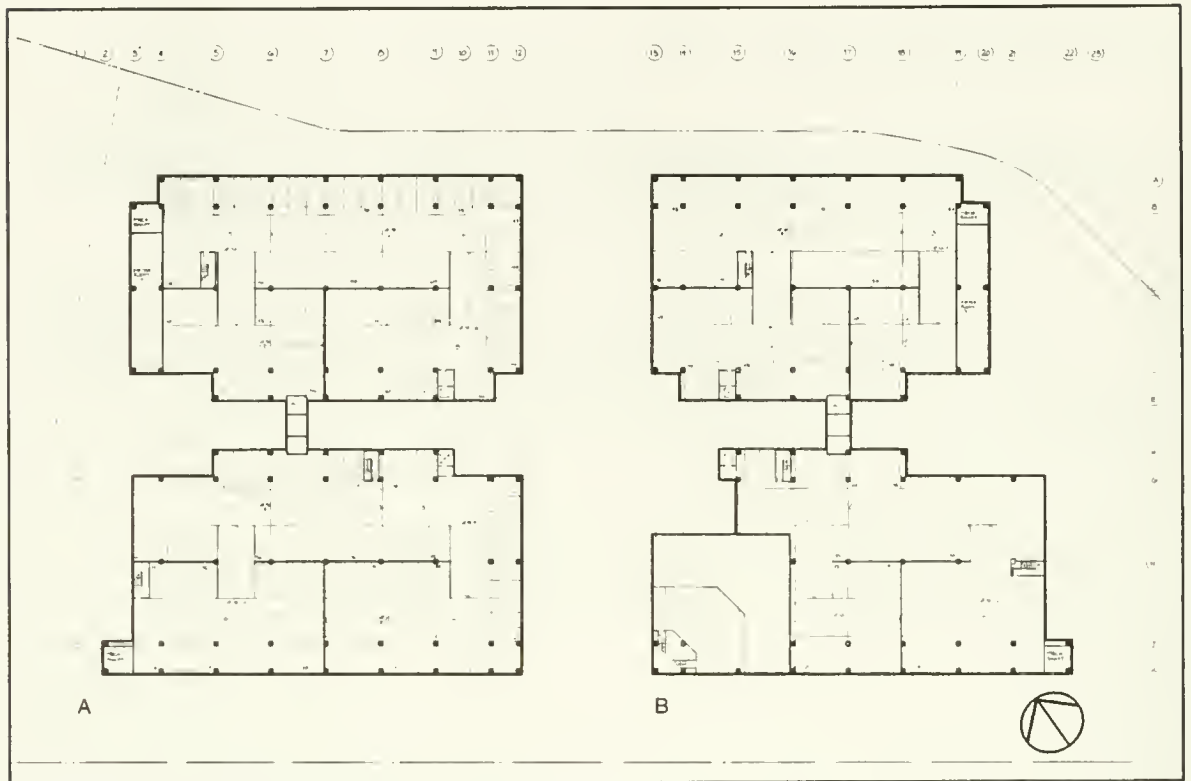


Figure 7 - Parking Plan : Basement Level (P-B)

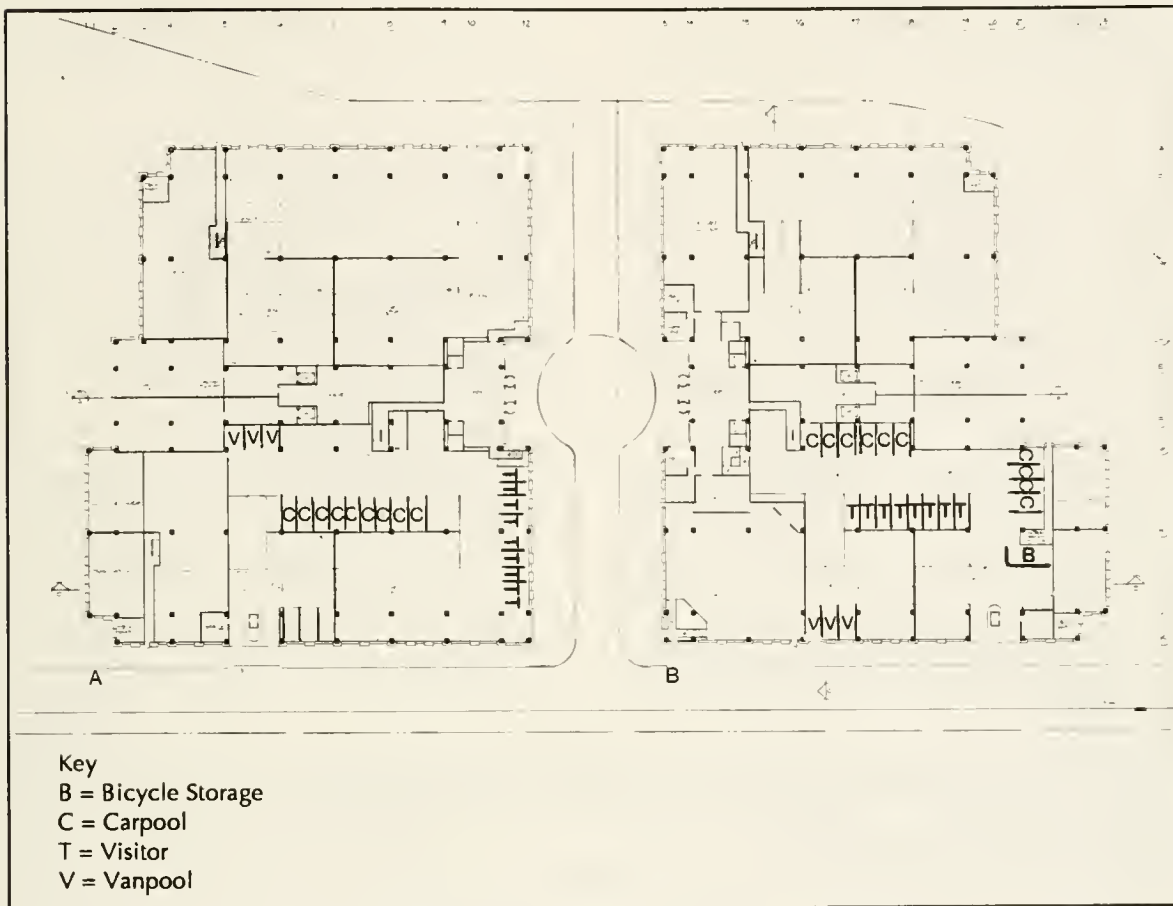


Figure 8 - Parking Plan : Level 1 (P-1)

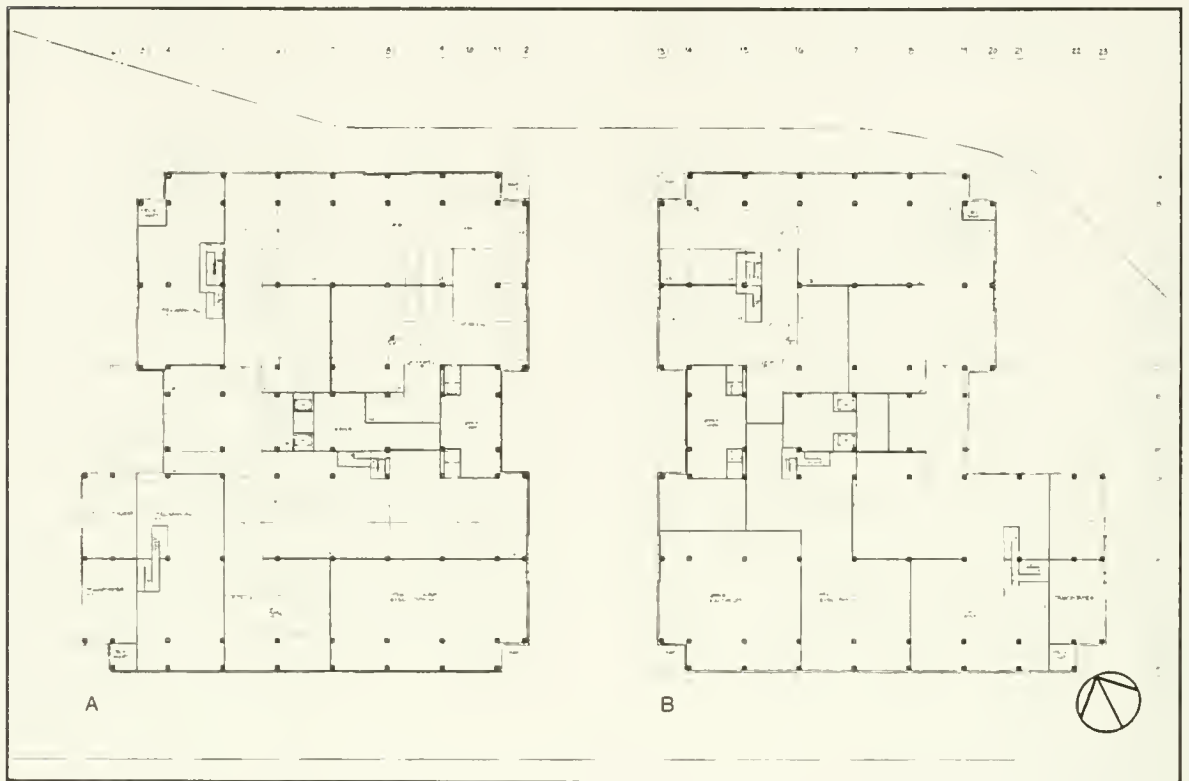


Figure 9 - Parking Plan : Level 2 (P-2)

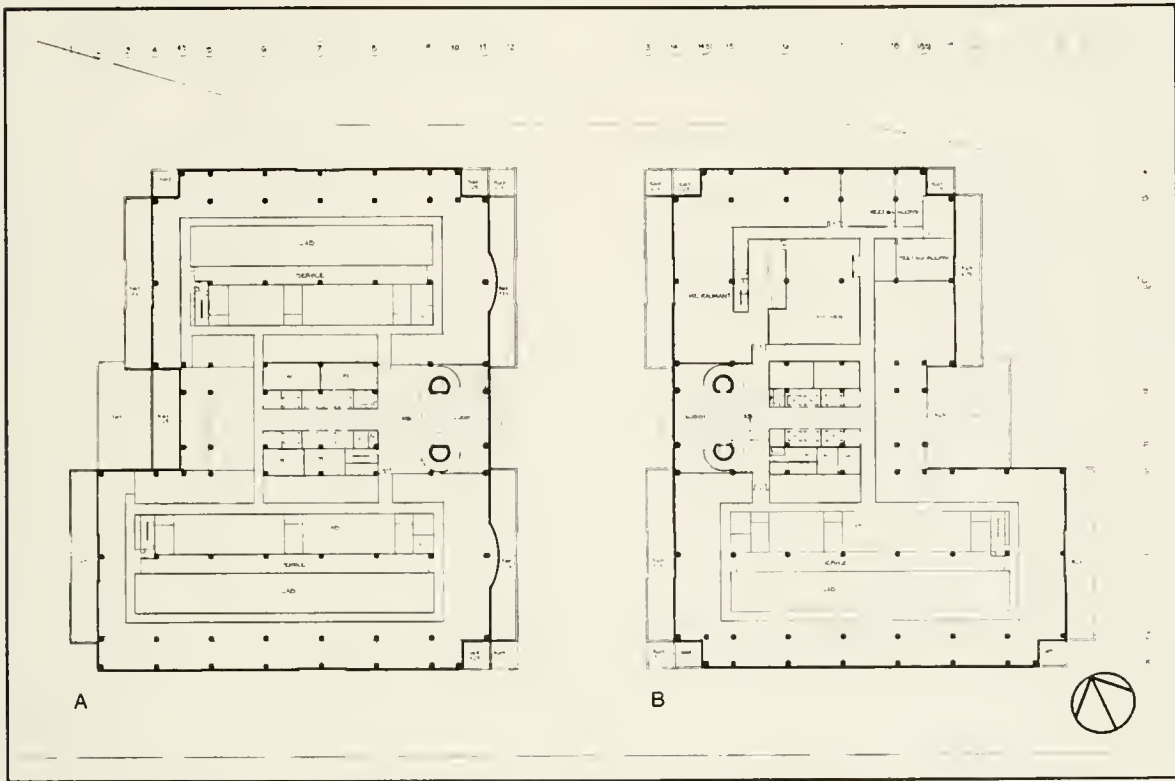


Figure 10 - Floor Plans: Level 1 - Lobby

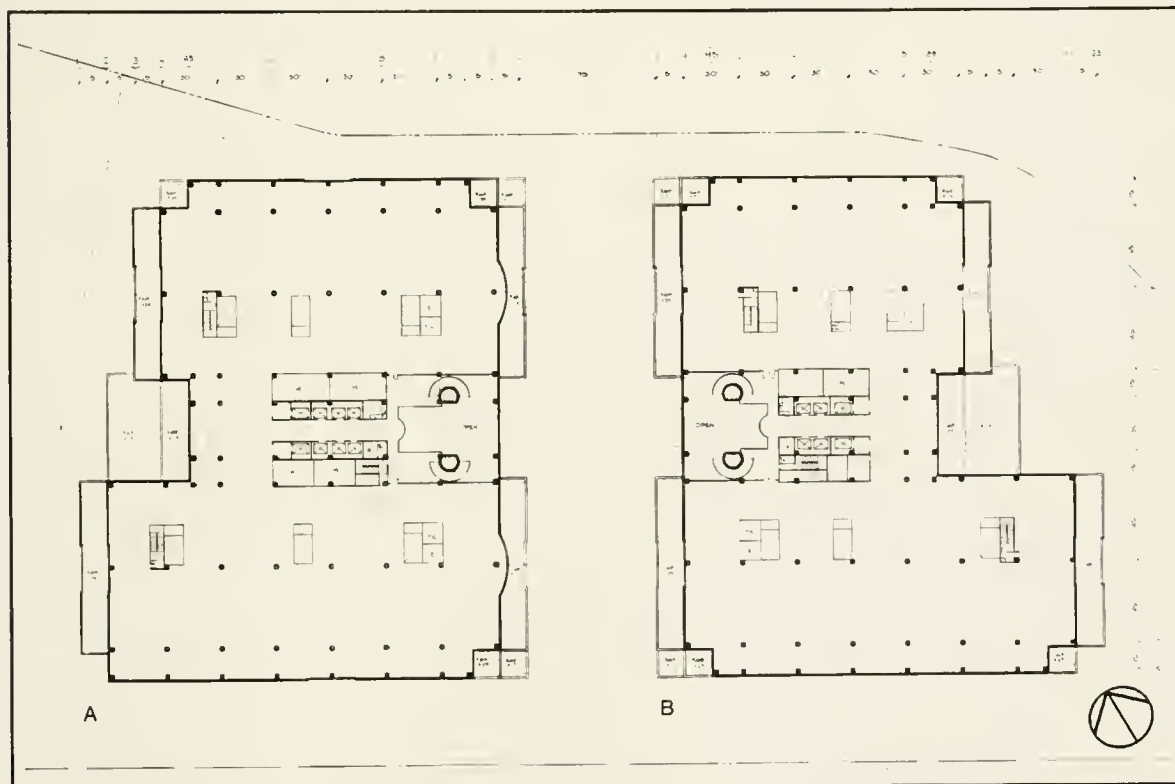


Figure 11 - Floor Plans : Level 2

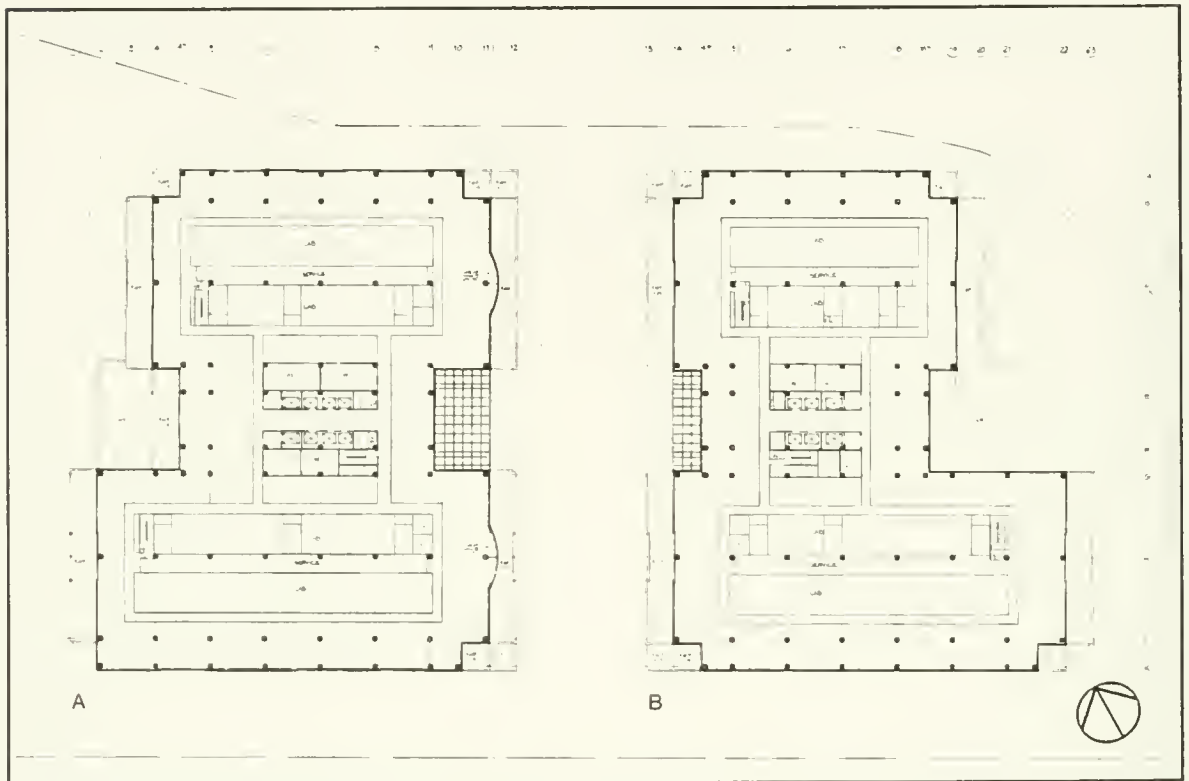


Figure 12 - Floor Plans : Levels 3,4,5,6 (Building A)
Levels 3,4 (Building B)

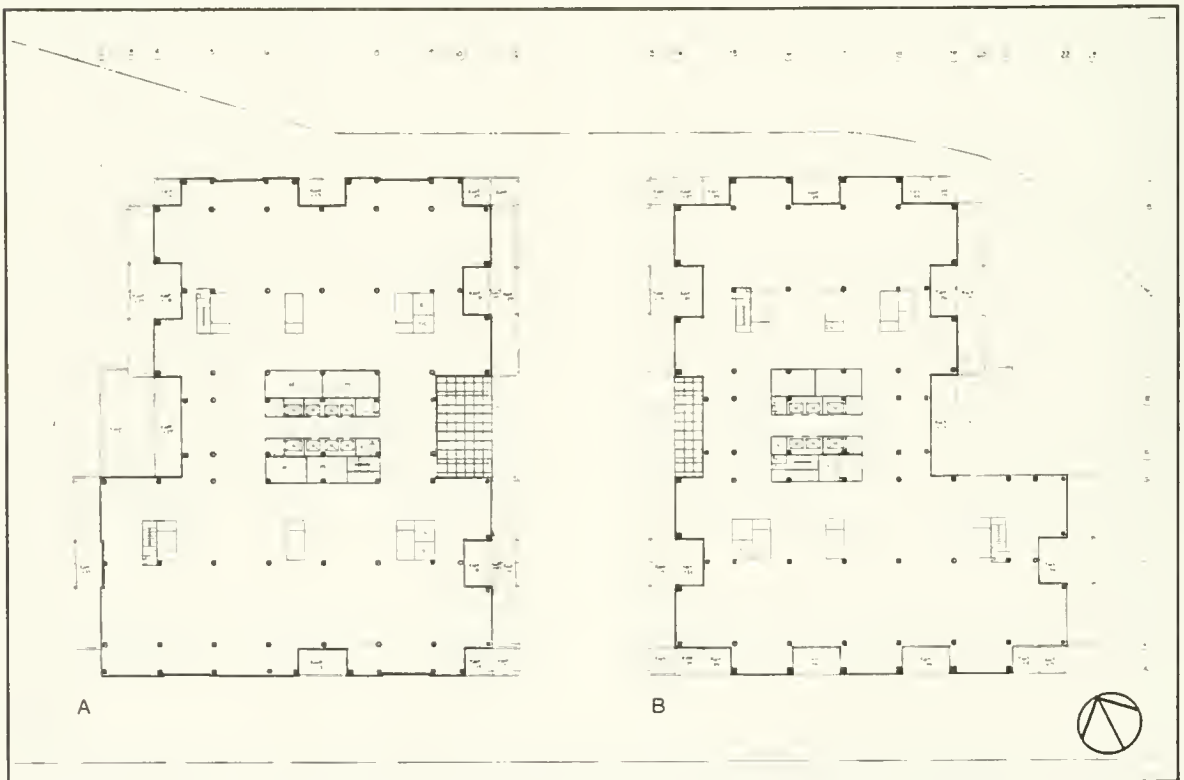


Figure 13 - Floor Plans : Level 7 (Building A)
Level 5 (Building B)

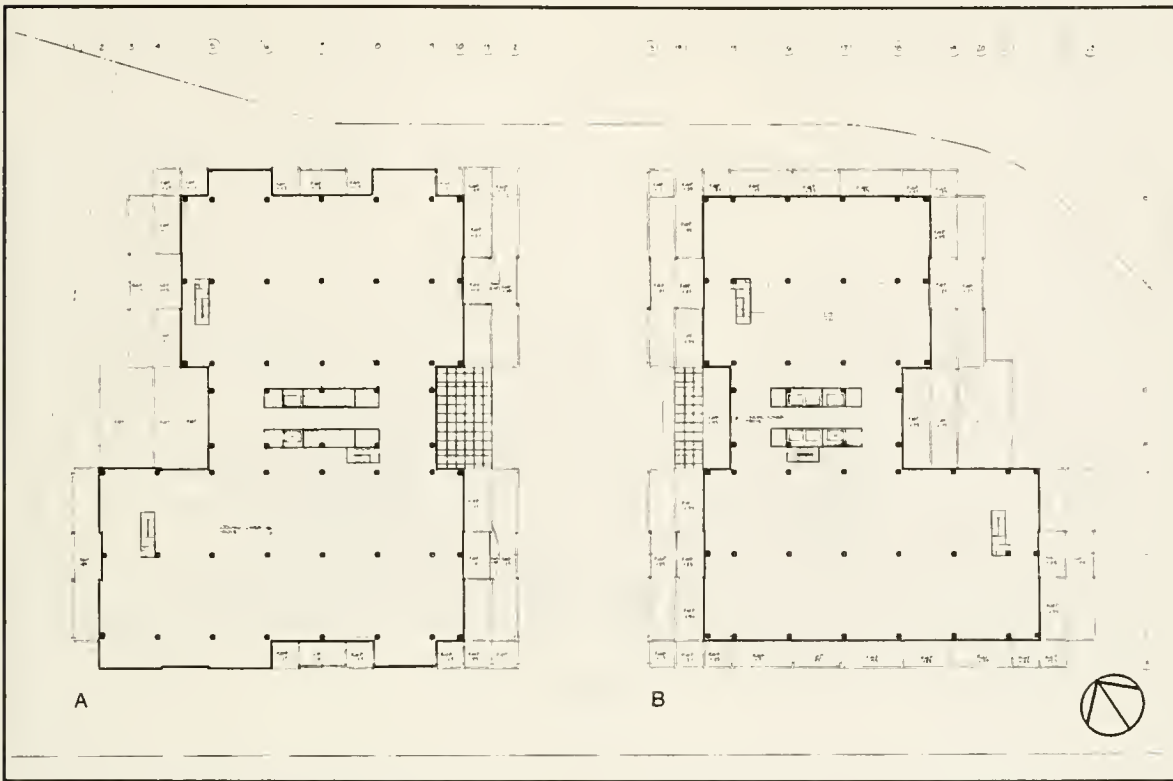


Figure 14 - Floor Plans : Mechanical

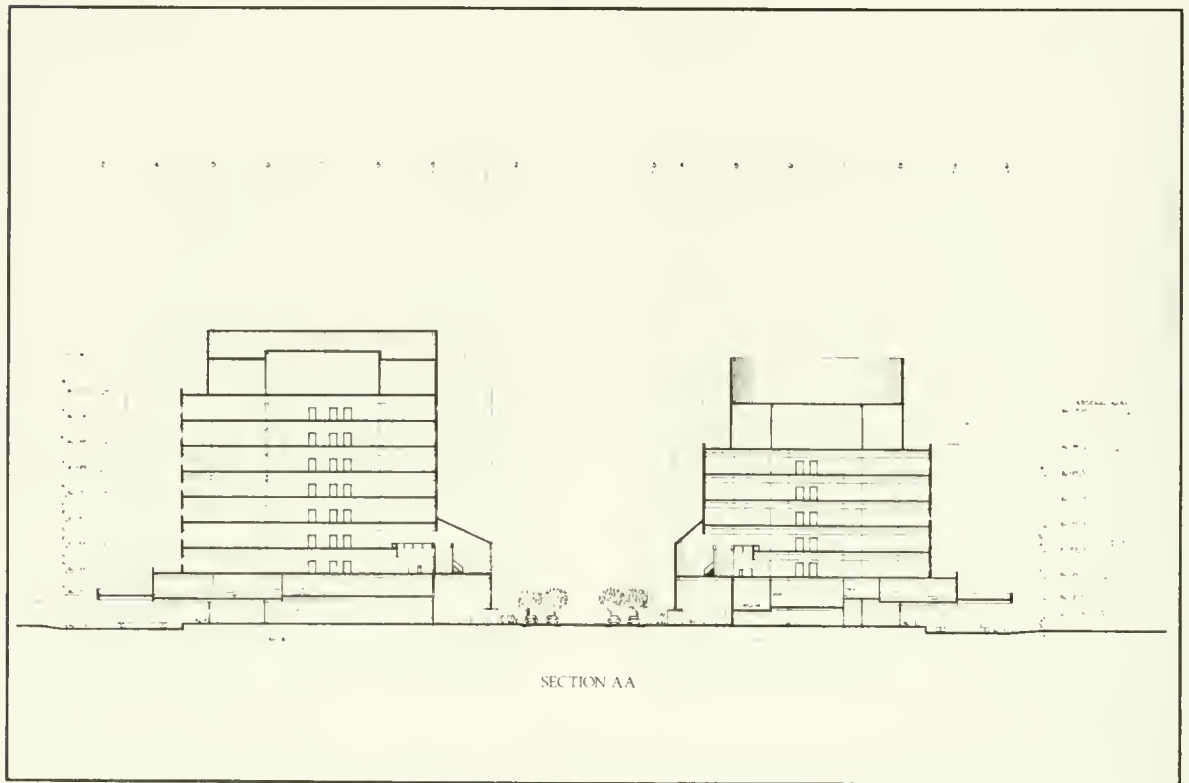


Figure 15 - Proposed Project : Section A-A

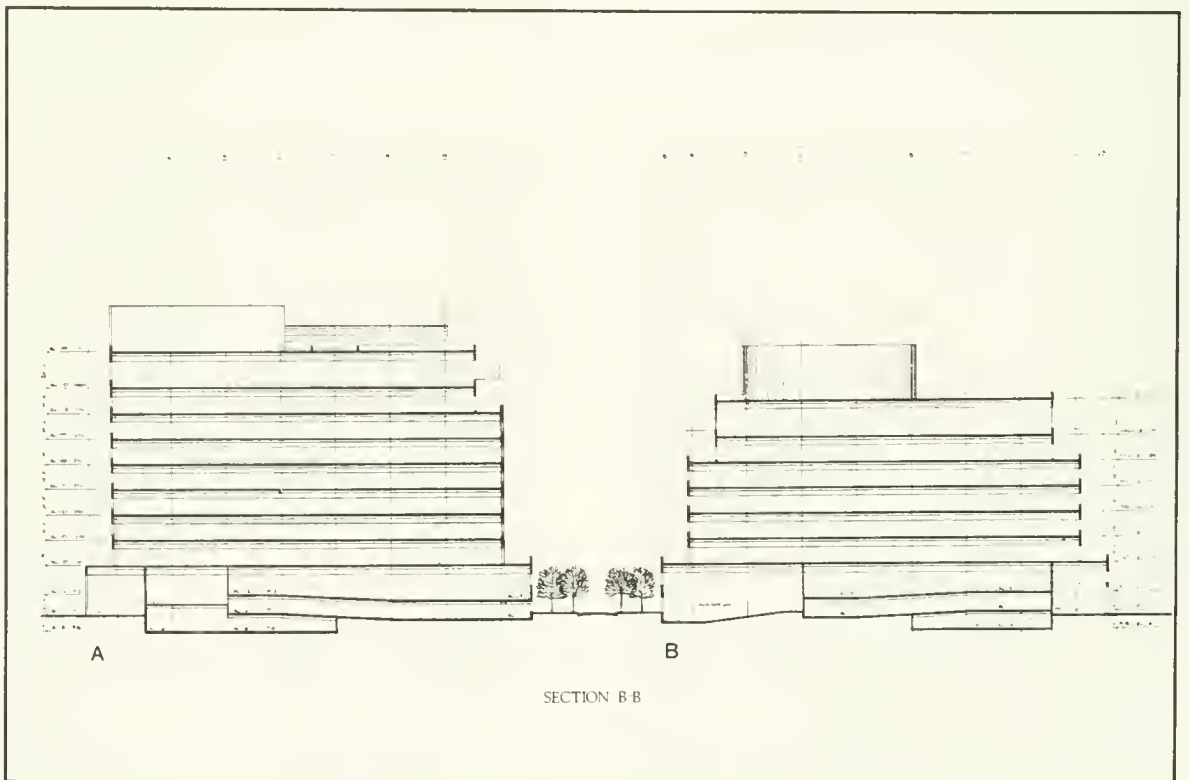


Figure 16 - Proposed Project : Section B-B

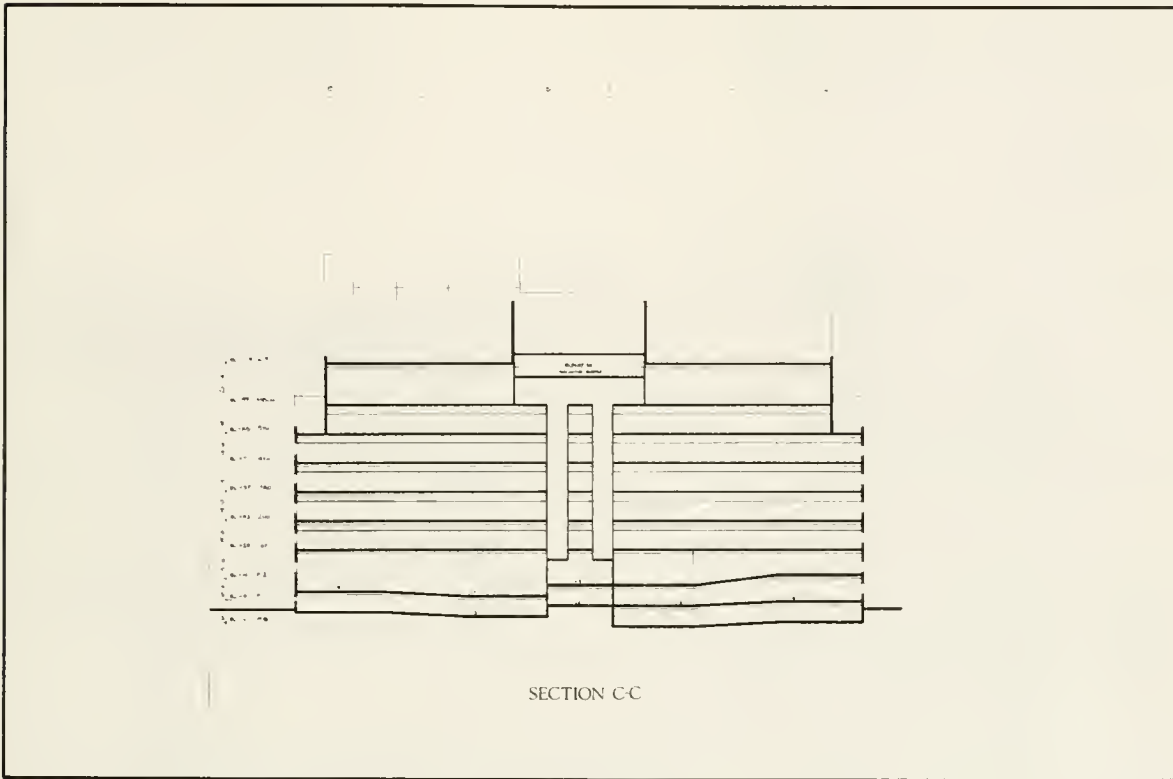


Figure 17 - Proposed Project : Section C-C

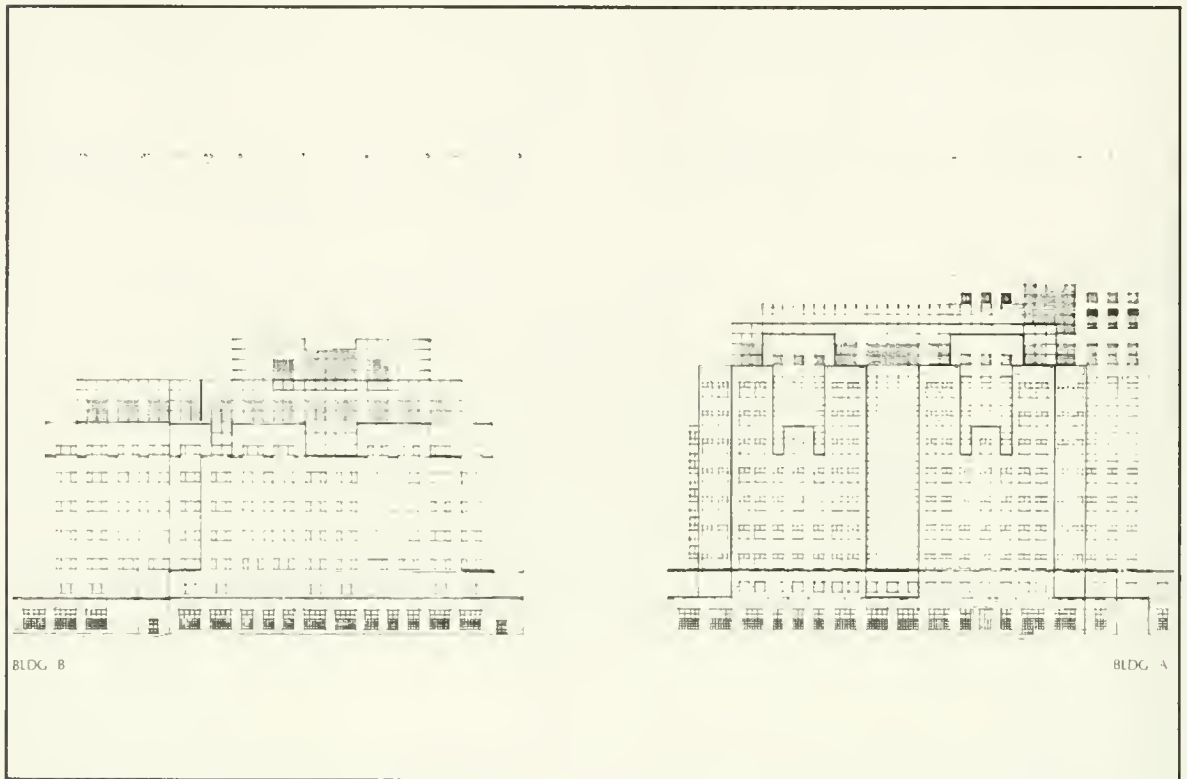


Figure 18 - Proposed Project : North Elevation (Buildings A and B)

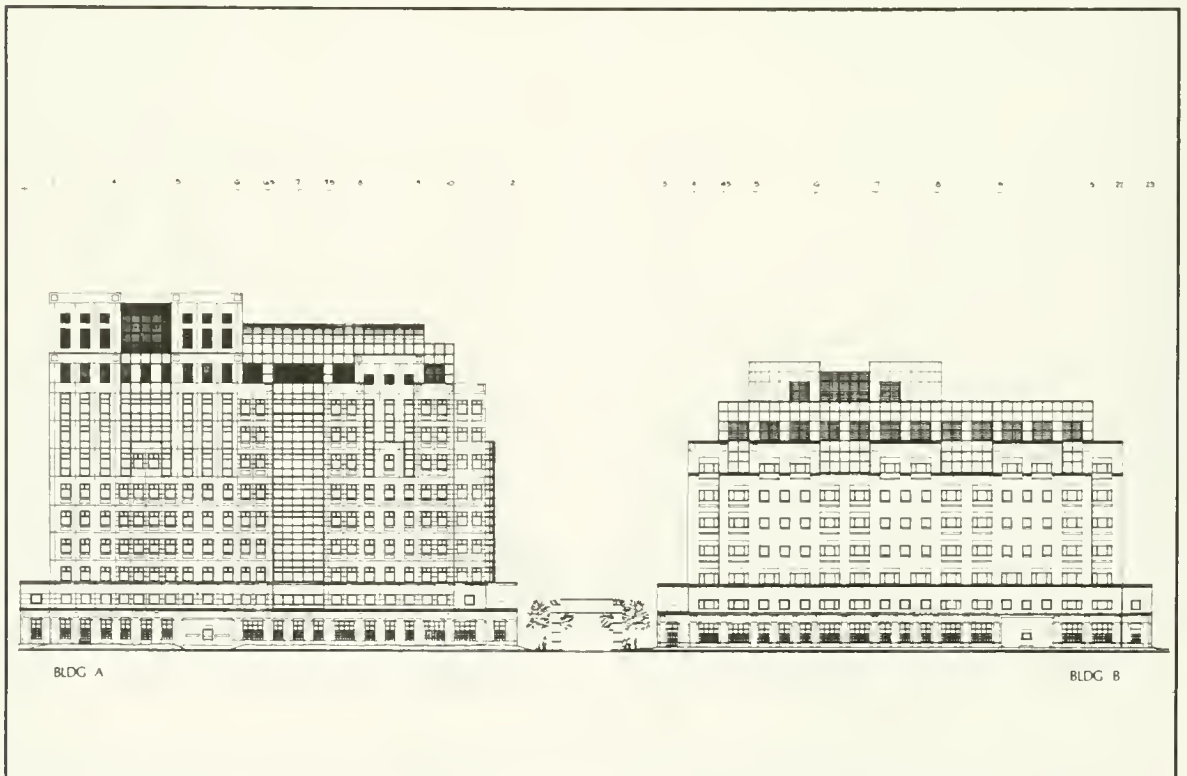


Figure 19 - Proposed Project : South Elevation (Buildings A and B)

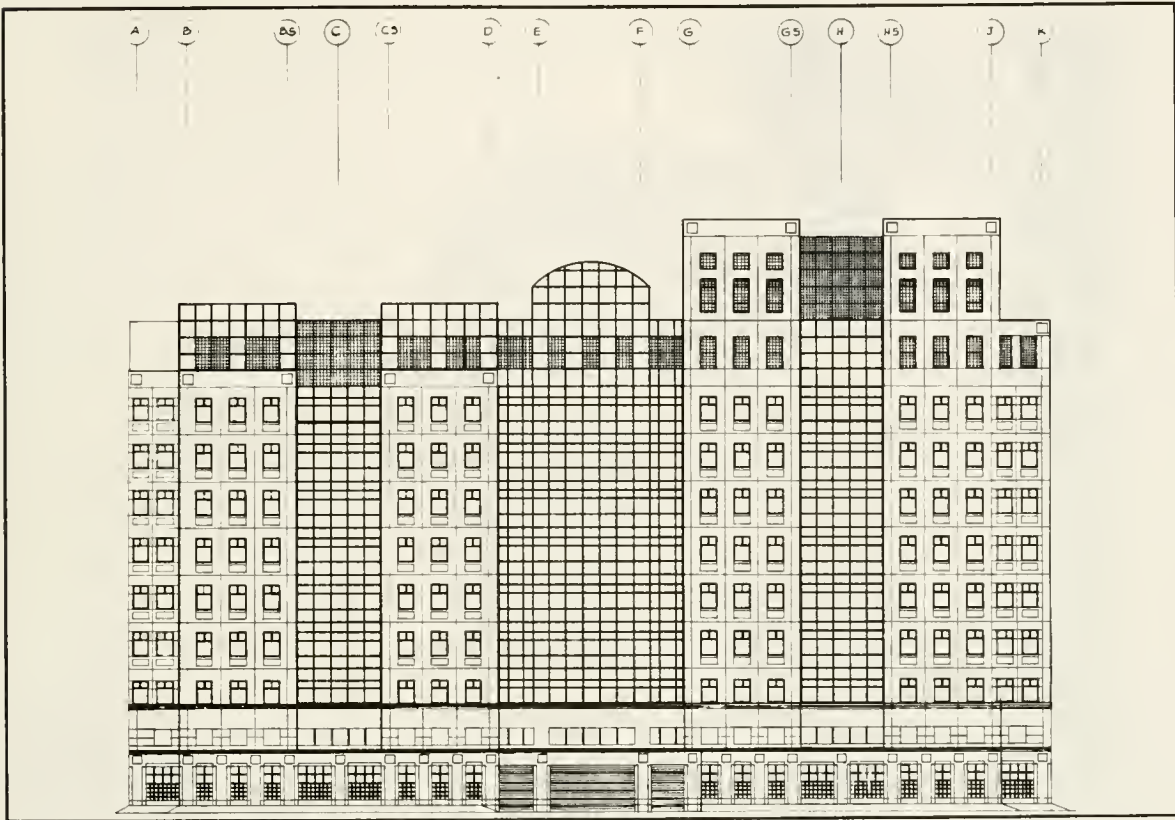


Figure 20 - Proposed Project : West Elevation (Building A)

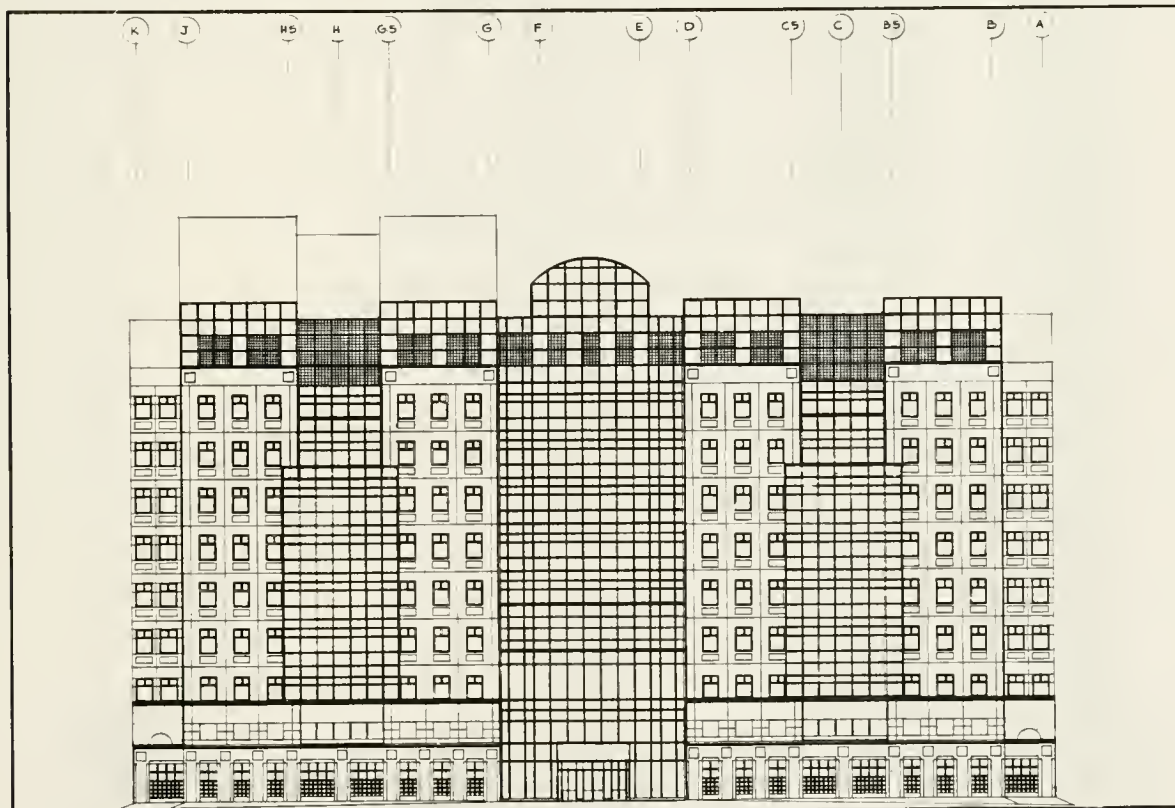


Figure 21 - Proposed Project : East Elevation (Building A)

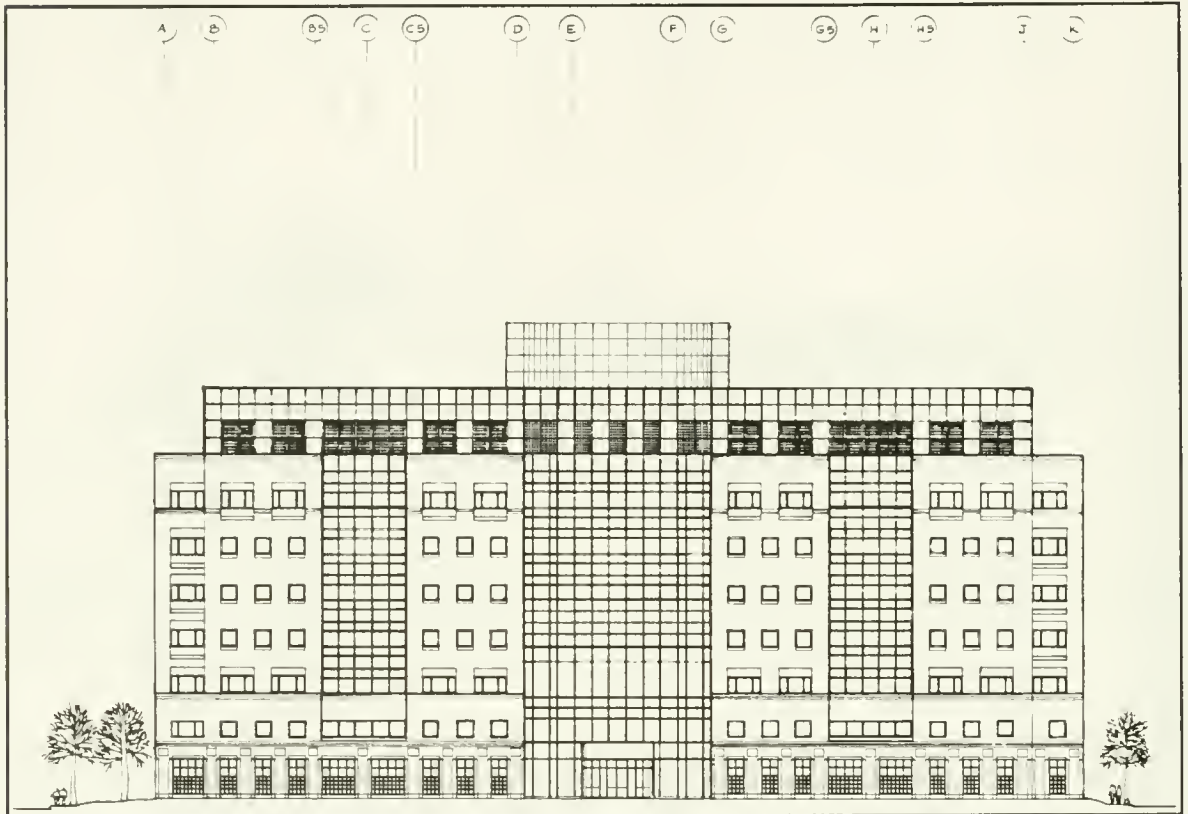


Figure 22 - Proposed Project : West Elevation (Building B)

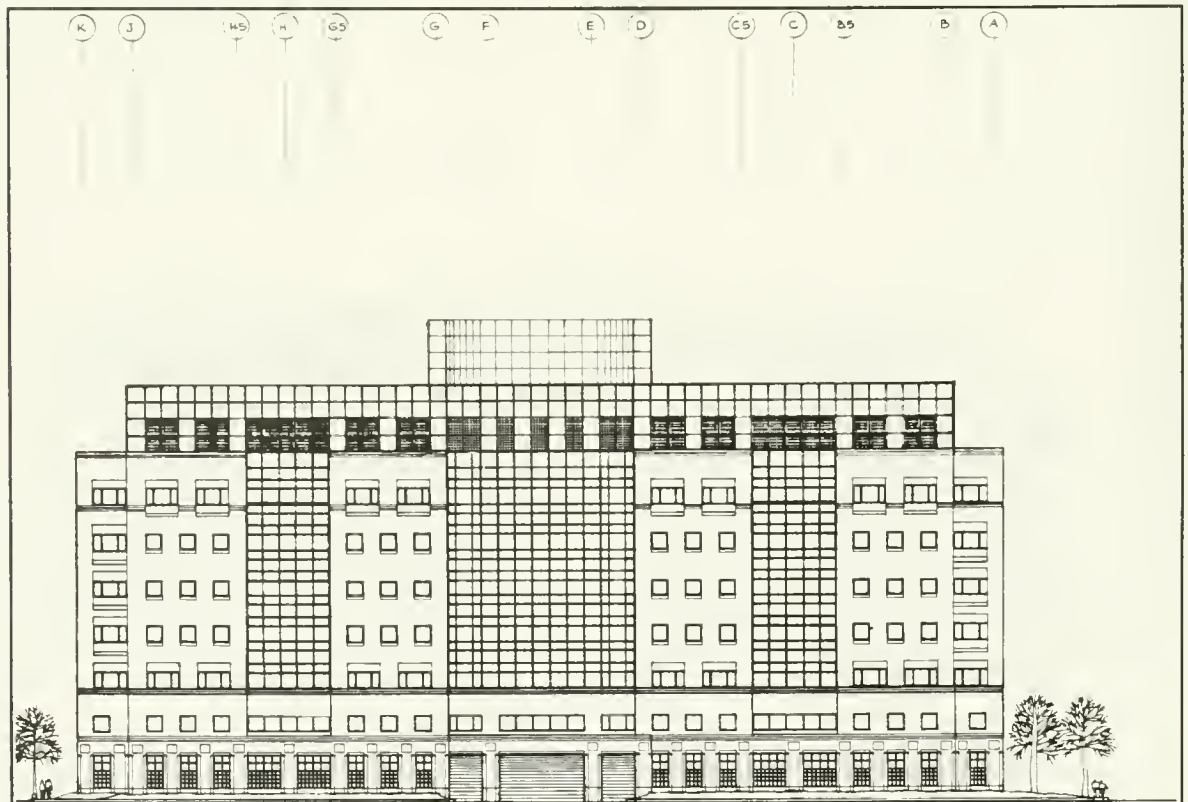


Figure 23 - Proposed Project : East Elevation (Building B)

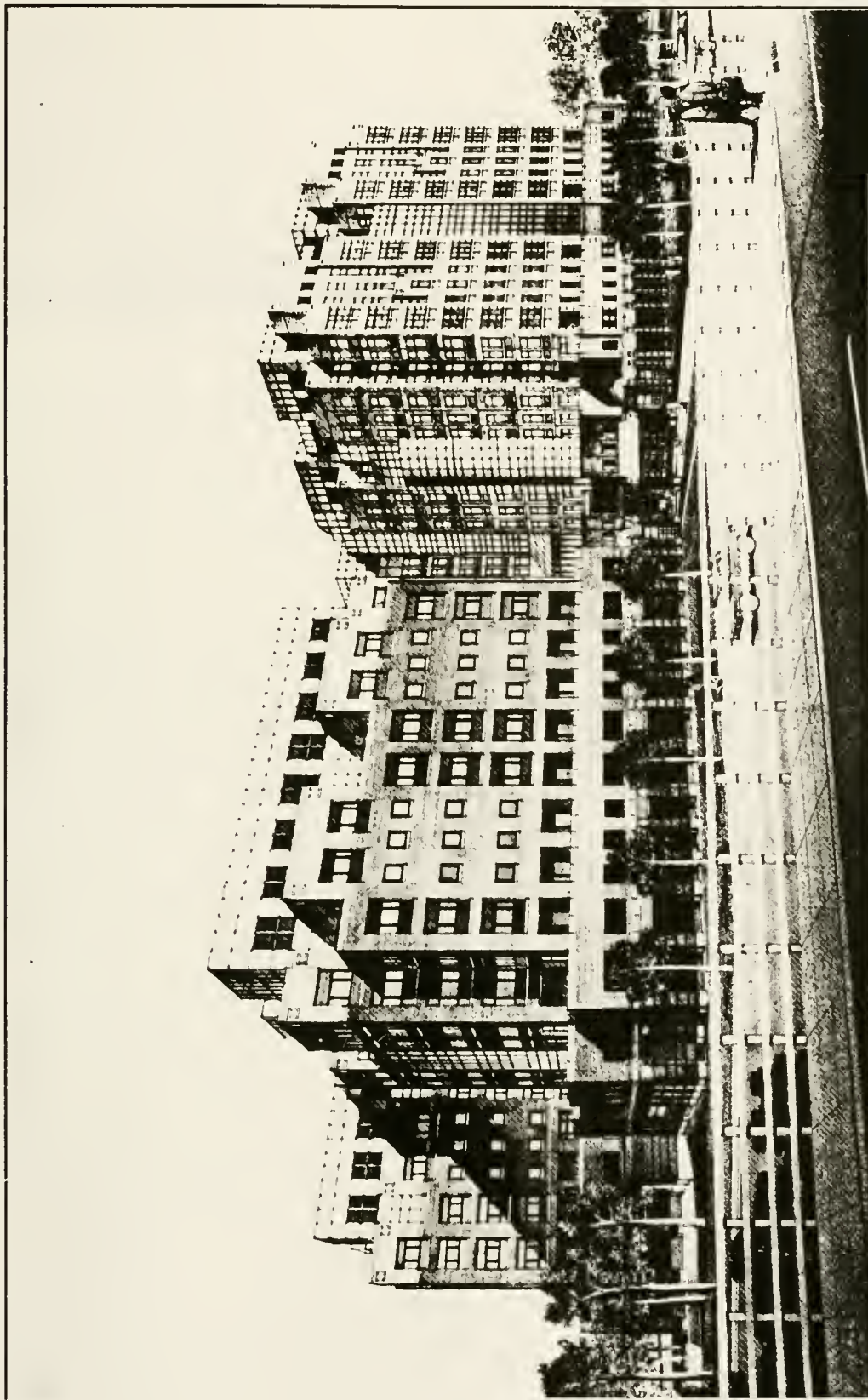


Figure 24 - Proposed Project: Perspective From Southampton Street

**II. LETTER 1: BOSTON REDEVELOPMENT AUTHORITY
DETERMINATION OF ADEQUACY ON DRAFT PIR**

LETTER #1

April 3, 1989

Mr. Dean F. Stratouly
President
Congress Group Ventures
One Memorial Drive
Cambridge, MA 02142

Dear Mr. Stratouly

RE: BOSTON SCIENCE CENTER

This letter is the Preliminary Adequacy Determination (this "Determination") of the Boston Redevelopment Authority (the "BRA") with respect to the Draft Project Impact Report (the "DPIR") for your proposed Boston Science Center project at 301 Southampton Street (the "Project"), which you submitted to the BRA on January 3, 1989.

RESEARCH FACILITIES

Scientific research and teaching laboratories not conducted for profit and accessory to a college or university granting degrees by the authority of the Commonwealth of Massachusetts are a conditional use in I-2 districts. Your Project Notification Form indicates that the facility would be used for college- or university-related scientific research. To receive a conditional use permit, you are obliged to comply with the Development Impact Project (the "DIP") requirements. One such requirement is that the BRA find that nothing in your DIP Plan "will be injurious to the neighborhood or otherwise detrimental to the neighborhood." To ensure that this requirement is met, you must include in your Final Project Impact Report (the "FPIR") an analysis which describes the degree to which the proposed animal research use complies with state and federal regulations governing this activity, and which describes the respective approval processes, including all licenses and permits required.

DENSITY EXCEEDING AS-OF-RIGHT

The Boston Science Center proposal exceeds the as-of-right zoning in this district by more than fifty percent. To receive a variance for density, you are again obliged to comply with the DIP requirements, which require that nothing in your DIP Plan "will be injurious to the neighborhood or otherwise detrimental to the neighborhood." This standard has been interpreted to require that the BRA balance the benefits and burdens which the project presents. To ensure that the standard is met, you must

- 2 include in your FPIR a comprehensive program of public benefits that are generated by your project and that will accrue to the surrounding neighborhoods and to the city as a whole.

ARTICLE 31 REQUIREMENTS

In its review of the DPIR, the BRA has identified certain components which are insufficient and which you must modify, and additional information which the BRA requires for a final adequacy determination. The following is a description of the sufficiency of the materials submitted in the DPIR, and the additional materials which you must include in the FPIR. The BRA requires submission of these materials to continue its review of the Project in connection with recommendations to the Board of Appeal with respect to the zoning relief required for the Project, pursuant to Articles 6 and 7 of the Boston Zoning Code (the "Code"), and with respect to approval of the Development Impact Project Plan, pursuant to Articles 26 and 26B of the Code.

The following are the BRA's specific comments in reference to the DPIR.

I. TRANSPORTATION COMPONENT

A. Traffic Management Element

The traffic management element submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information which must be included in the FPIR:

- 3 1. The number of trips generated by the Project needs further analysis. Within the Trip Generation Section of the DPIR you state that the generation rate which best corresponds to a research facility is based upon the number of employees, rather than building size. While this statement may be accurate, an analysis using a more precise measure of employees based on the specific type of research space you are proposing is needed. If this more precise measure of employees exceeds the ITE rate quoted in the DPIR, then an analysis using the ITE rate must be conducted.

If the number of trips generated increases as a result of the more precise measure of employee density, then a qualitative sensitivity analysis must be performed which compares the impact on the transportation network of the new trips generated to the trips generated by Option A in the DPIR.

2. The analysis in the FPIR must include truck and service vehicle and taxi generation, as required in the scoping requirements.
3. More explanation is needed with regard to the shuttle bus proposed as a mitigation measure. More detail is required in the FPIR showing the degree of demand for the shuttle bus, its headways, schedule, and hours of operation, and its specific route.

A more complete package of mitigation measures must be developed and refined with the Boston Transportation Department as a Transportation Access Plan Agreement for this Project is formulated.

4. The Trip Distribution section of the DPIR did not identify a path to distribute traffic through Columbus Circle. Since the Southeast Expressway already operates at a level above its capacity, new trips generated by the Project will create additional traffic on parallel arterial routes. Therefore, analysis must be included in the FPIR which distributes traffic accordingly. The tendency of project-generated traffic to divert to arterial streets when the expressway is congested should be quantified.
5. The peak hours for the nine intersections studied are listed in Table 1 of the DPIR, but the peak hour of the Project is not cited. Explanation is needed concerning how the Project's traffic was incorporated within the peak hours of each intersection. The FPIR must include the a.m. and p.m. peak hours for the Project.
6. According to Table 11, in 1991 the level of service at the intersection of Southampton Street and the Southeast Expressway northbound ramps improves in the build condition over the no-build condition. This must be explained in the FPIR.

B. Parking Management Element

The parking management element submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information which must be included in the FPIR:

1. If the number of trips generated increases as a result of the more precise measure of employee density discussed above, then measures to address the increased demand must be proposed in the FPIR.

- 10 2. The FPIR must show which spaces are devoted to employees, which are devoted to visitors, and which are devoted to vanpools or the shuttle bus.

C. Construction Management Element

The description of the proposed construction mitigation measures in the DPIR is sufficient.

D. Monitoring Element

The monitoring program described in the DPIR is sufficient to satisfy the scoping requirements.

Except for the above requirements, the Transportation Component of the DPIR is sufficient.

II. ENVIRONMENTAL COMPONENT

A. Wind

The analysis of the wind impacts submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information which must be included in the FPIR:

1. The DPIR shows that Option B would have slightly lower wind impacts as a result of the slightly lower building height.

11 A new design which features a slightly lower building height for the eastern component must be developed to lessen wind impacts as much as feasibly possible in the area where pedestrians would walk between the Project and Andrew Square. A sensitivity analysis must be conducted which qualitatively compares the impacts of this new option to the impacts of Option A shown in the DPIR.

B. Shadow

The analysis of the shadow impacts submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information which must be included in the FPIR:

- 12 1. Times for June 21 and September 21 must be Daylight Savings. It is unclear whether the times listed on the table on page 81 of the DPIR are typographical errors or times actually used. This must be clarified.

C. Air Quality

The analysis of the air quality impacts submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information which must be included in the FPIR:

1. Tables 16 and 17 indicate CO concentrations at the Southampton Street receptors assuming that the traffic mitigation measures have been implemented. The analysis must also indicate concentrations, assuming that the mitigation measures are not implemented. In addition, the differences in worst case wind directions for the same receptor locations for the different cases (Existing, 1991 No Build, 1991 Build) must be explained in the FPIR.
2. It is not clear from the description on page 107 and Figure 60 at what height the garage exhaust vents will be located; this must be made more explicit. If the refined assumptions in the trip generation section caused the garage to be redesigned, then changes in the garage exhaust system must be described in the FPIR. In addition, a qualitative comparison must be made between the impacts generated by a new design and those generated by Option A studied in the DPIR. In either case, the exhaust must not be directed to the pedestrian or sidewalk level.
3. In Table 19, it is unclear whether traffic-related contributions (which were analyzed) have been included in the total. This must be clarified.
4. In Table 20, various columns need to be labeled. It would appear that there are some violations at the P-2 level. This must be explained in the FPIR. Garage ventilation rates must be set to limit the CO concentration to 35 ppm, to comply with the DEQE requirements.
5. Although a specific analysis of fume hood emissions may not be possible at this time, a more detailed description of the proposed exhaust system and potential downwash must be provided.

D. Geotechnical Impact

The analysis of the geotechnical impacts submitted in the DPIR is sufficient to satisfy the scoping requirements, but

for the following information which must be included in the FPIR:

- 22 1. An analysis of the impact on ground movement/settlement from the removal of the existing piles on site must be submitted.

E. Hazardous Waste

The analysis of the impacts of hazardous waste and discussion of compliance with Chapter 21E of the General Laws of Massachusetts submitted in the DPIR is sufficient to satisfy the scoping requirements.

F. Construction Impacts

The construction impacts analysis submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information which must be included in the FPIR:

- 23 1. Commitment to the various mitigation measures described must be included in the FPIR.
- 24 2. Identification of the disposal site for the demolition wastes must be provided.

G. Rodent Control

- 25 The rodent control section submitted in the DPIR is not sufficient to satisfy the scoping requirements. The specifics of the rodent control program must be described more fully in the FPIR.

Except for the above requirements, the Environmental Component of the DPIR is sufficient.

III. URBAN DESIGN COMPONENT

The materials submitted in the Urban Design Component of the DPIR are sufficient to satisfy the scoping requirements, but for the following studies which must be included in the FPIR:

A. Massing and Height

- 26 1. The massing shown in Option A of the DPIR consists of two identical U-shaped structures. In order to make the massing more compatible with architecture in Boston, a scheme comprised of two asymmetrical structures must be studied.

- 27 2. Because of the large floorplates, the massing of the two components must be further broken down to create the impression of four masses rather than two.
- 28 3. To further differentiate the two components, the heights of the two components must differ. With the railway embankment 15 feet above the western edge of the site and Southampton Service Road at grade to the north and east of the site, the urban design context suggests that the eastern component be shorter than the western component.

B. Roadways

- 29 1. The vehicular circulation components must provide a precedent for an infrastructure that could potentially extend into abutting areas at some point in the future. To provide this precedent, the site plan must be modified so that the function of roadways is not duplicated. The ring road on the north side of the Project must be eliminated.
- 30 2. The cul-de-sac which bisects the Project must become a road with a more public character that extends north and connects directly to the Southampton Service Road.
- 31 3. In addition, the ring road on the western side of the site must have the character of a boulevard. This road must not curve around the Project, rather extend northward parallel to the railroad embankment, more in the manner of a public street.

C. Open Space

- 32 1. To enhance the quality of the pedestrian environment, the open space that the Project provides must change in character from ill-defined, residual open spaces to more thoughtfully conceived, user-friendly open spaces. To accomplish this, the Project's transformers must be moved to within the building envelope, rather than designed as separate, free-standing structures.
- 33 2. The eastern and western components must be set further apart to provide more usable open space and to bring more light into the central courtyard.
- 34 3. Continuous sidewalks must be provided around both buildings.

- 35 4. Additional landscaping must be provided to serve as a buffer between the western component and the railway embankment. To further enhance the pedestrian environment, additional landscaping must also be provided between the Project and the Southampton Service Road.

Except for the above requirements, the Urban Design Component of the DPIR is sufficient.

IV. INFRASTRUCTURE SYSTEMS COMPONENT

The analysis of the Project's impact on infrastructure systems submitted in the DPIR is sufficient to satisfy the scoping requirements, but for the following information, the submission of which is required in the FPIR:

- 36 1. It is not clear whether the existing electrical and gas distribution systems are adequately sized to serve the Project. Any required systems extensions or upgradings must be referenced.
- 37 2. Electrical service must be discussed with the same thoroughness as that given to sewer and water service. Items such as emergency generators, fire alarm system connections, and special provisions for potential tenants (e.g. computer, cable) must be addressed.
- 38 3. The water supply for all water demands, including consumption, laboratory and HVAC use, and fire treatment systems, comes from a 16-inch main. Further discussion of how these needs are accommodated is required in the FPIR. In addition, a discussion of the ability of local water systems to serve the project without disproportionately affecting the regional water supply relative to other land uses is required.
- 39 4. It is stated that building tenants will be required to apply for all necessary permits and to identify special measures needed to guarantee that laboratory wastes are treated to sewer system (MWRA/BWSC) standards prior to discharge. The mechanism used to require this action, the language regarding this requirement, and the system for monitoring compliance with these requirements must be set forth in the FPIR.

Except for the above requirements, the Infrastructure Systems Component of the DPIR is sufficient.

V. AGREEMENTS

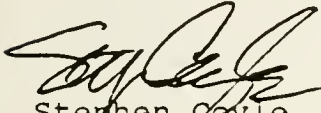
The following must be provided in form and content satisfactory to the appropriate signatory public agencies before the Project can receive final approval by the BRA. They are not required for the FPIR.

1. Transportation Access Plan Agreement
2. Traffic Maintenance Plan in conformity with the City's Construction Management Program
3. Development Impact Project Agreement pursuant to Articles 26A and 26B of the Code
4. Boston Residents Construction Employment Plan, pursuant to Chapter 12 of the Ordinances of 1986 of the City of Boston, as amended by Chapter 17 of said Ordinances, and Executive Order Extending Boston Residents Job Policy, signed by the Mayor on July 12, 1985

But for the required corrections, clarifications, and additional information described above, the DPIR submitted is sufficient to satisfy the scoping requirements.

We look forward to reviewing the FPIR.

Sincerely,



Stephen Coyle
Director

**LETTER 1: BOSTON REDEVELOPMENT AUTHORITY
DETERMINATION OF ADEQUACY ON DRAFT PIR**

Comment #1:

Analyze the degree to which the proposed animal research use complies with State and Federal regulations; include approval process and required licenses and permits.

Response:

The Proposed Project will be used as a research laboratory. All uses, including any accessory keeping of animals, will be required to comply with applicable state, federal and local requirements. Most state and federal regulations apply to the specific biomedical research activities being performed (i.e. biological, medical, biomedical and biophysical) by the company, institution, or entity which is conducting it. The state and federal regulations and standards, with which any applicable activities will fully comply, include but are not limited to:

State

105 CMR 130.360

Provides that hazardous/infectious waste be bagged and sealed twice in 1.5 ml polyethylene bags, when stored on-site. Also details the temperatures, length of storage, and other details of rooms. (OSHA regulates labelling.)

Provides that on-site treatment or disposal be only carried out by steam, gas or chemical sterilization (autoclaves) or incineration. NIH standards for temperatures and dwell times are referenced. Records must be kept. Once treated, waste can be removed as non-hazardous.

Provides that off-site disposal be by incineration, only, to be done within 104 days of receipt at the facility. Storage as above, except in 3.0 ml bags. Packaging regulated by 720 CMR 8.00. Transportation governed by 49 CFR ss 173. 386 and 387.

Provides that sharp wastes be disposed of or stored in rigid containers and/or incinerated.

	<p>Requires that a waste disposal plan be devised by a qualified internal committee. Also that manifests be kept and the Department of Public Health and Department of Environmental Quality Engineering be reported to annually.</p> <p>For regulation of sewerage disposal, see 310 CMR 15.02, Title 5 of the State Environmental Code, and/or local board of health regulations.</p> <p>See also 105 CMR 30.060 - 30.385 (misc.) and 310 CMR 30.000 - 30.111 (identification of wastes).</p>
<p>State MGL, Ch.111 S 5B</p>	<p>Requires that sources of ionizing or non-ionizing radiation be registered with the Department of Public Health.</p> <p>Administered by Radiation Control Program.</p>
<p>105 CMR 120.100</p>	<p>Nuclear Regulatory Commission must first approve, where applicable.</p>
<p>MGL, Ch. 111, S 31C</p>	<p>Refers to town Boards of Health regulating atmospheric pollution (including smoke, particulants, toxic or radioactive substances).</p>
<p>Federal 10 <u>CFR</u>, Part 33 and Regulatory Guide 10.5, 10.7</p>	<p>Provides rigorous standards for the use of by-product 10 material, and the review of qualifications of the applicant being approved for small quantity and broad scope permits.</p> <p>Provides for the regulation of sealed source equipment, such as gas chromatography devices and X-Ray fluorescent analyzers.</p>
<p>10 <u>CFR</u>, Part 20, S 20.108</p>	<p>Regulates bioassay for tritium.</p>
<p>EPA</p>	<p>EPA requires that sources of radiation be registered with them and that an ID number be obtained.</p>

Federal

50 CFR 13.11, 13.12,
14.91, 14.92, 21.13

Provides for permitting by the Federal Fish and Wildlife Service to buy, sell, and use animals for scientific research. Where exemptions apply, recordkeeping only is required.

9 CFR part 1

Animal Welfare Act provides that the Animal and Plant Health Inspection Service of the USDA regulate the use and keeping of animals. Provides standards, registration and annual reporting requirements.

State

MGL ch. 131, S 23
and 321 CMR 2.12

Provides for regulation of the keeping of protected animals by the Division of Fisheries and Wildlife and requires that propagator's license be obtained.

105 CMR 910.00 -
910.210 and MGL
ch.140, S 174D

Regulates the facilities, animal care and operational standards of research institutions using dogs or cats.

Requires that a license be obtained from the Commissioner of Public Health.

Provides that the Department of Public Health license, enforce, inspect, and monitor reporting from these facilities.

Furthermore, a provision of each project lease will be compliance with all applicable laws, as described in response #39.

Also an Emergency Response Plan is devised by research entities which is filed with the police and fire departments, in the event of an accident.

Many of the regulations outlined in this review provide for inspections, including those conducted by the Department of Public Health. In addition, the Massachusetts Water Resources Authority performs spot effluent monitoring. The ASPCA also conducts inspections of animal facilities. Typically, institutions have additional internal committees which monitor the organization's regulatory compliance and deal proactively with systems and facilities issues.

Besides regulations, National Institutes of Health (NIH) publishes standards and guidelines for researchers which are recognized industry-wide, including:

-
- a. Biosafety in Microbiological and Biomedical Laboratories, U.S. Department of Health and Human Services, Centers for Disease Control (CDC) and the NIH. HHS Publication No. (CDC) 88-8395.
 - b. Recommendations for Prevention of HIV Transmissions in Health Care Settings. Morbidity and Mortality Report, August 21, 1987, Vol. 35, No. 25.
 - c. Update: Universal Precautions for Preventions of Transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and Other Bloodborne Pathogens in Health-Care Settings. Morbidity and Mortality Weekly Report, June 24, 1988, Vol. 37, No. 24.
 - d. Agent Summary Statement for Human Immunodeficiency Viruses (HIV); Included are HTLV-III, LAV, HIV-1, HIV-2. Morbidity and Morality Weekly Report, April 1, 1988, Vol. 37, No. S4.
 - e. Recommendations for the Safe Handling of Parenteral Antineoplastic Drugs, NIH Publication No. 83-2621.
 - f. NIH Guidelines for the Laboratory Use of Chemical Carcinogens, NIH Publication No. 81-2385.
 - g. Guidelines for research Involving Recombinant DNA Molecules (49 FR 46266 or latest revision) and Administrative Practices Supplement.
 - h. Procedures for the Domestic Handling and Transport of Diagnostic Specimens and Etiologic Agents, National Committee for Clinical Laboratory Standards, July 17, 1985, Vol. 5, No. 1.
 - i. Standards issued pursuant to the National Occupational Safety and Health Act of 1970 (29 CFR 1910).
 - j. Standards issued pursuant to the Atomic Energy Act of 1954 (42 USC 2021).

It should be noted that since NIH is the primary funding source for biomedical researchers, these guidelines are strictly adhered to.

There are numerous additional permitting and regulating laws and agencies, such as DEQE for incinerators, the fire department for flammable fluids, and the Department of Treasury for the use of ethyl alcohol.

Comment #2:

Include a comprehensive program of public benefits generated by the Project.

Response:

The following public benefits to the community and to the city as a whole, will be generated by the Boston Science Center:

Job Training - a contribution of \$486,000 will be made toward the jobs linkage program which promises job creation and training.

Permanent Jobs - the facility will generate 1,160 permanent full-time positions. Also, as a property manager of the Boston Science Center, Congress Group Ventures, Inc. will use all reasonable efforts to assure that 50% of the employment opportunities created by the Project will be made available to Boston residents, both by pursuing the goal of employing Boston residents in 50% of the operation, management, maintenance and security jobs at the Project and disseminating to project tenants the City's Employment Services Guide and offer information about the City's Employment Opportunity Plan.

Construction Jobs - a total of 1,800 person years of construction jobs will be created over the two year base building construction period, plus the 1-2 year tenant fit-up period. A Boston Residents' Construction Employment Plan will be executed, and in accordance therewith, the Proponent shall use its best efforts to ensure that each project contractor meets the Boston Residents' Construction Employment Standards, which require that 50%, 25% and 10% of all person-hours in construction jobs be worked by Boston residents, minorities, and women, respectively.

Housing - the linkage contribution toward the creation of affordable housing will be \$2,431,000.

Real Estate Tax Revenue - annual property taxes are estimated to be \$2.3 million for the Boston Science Center.

Childcare - the project will provide for a 5,000 square foot private childcare facility, which could accommodate up to 50 children of Boston Science Center employees.

Transportation - transit use will be prompted and assisted through: 1) provision of a shuttle bus service connecting Boston Science Center with the Andrew Square Red Line MBTA Station, 2) promotion of T-pass subsidies, and 3) on-site T-pass sales and information on routes and schedules, available through a transportation coordinator.

Vanpool and ridesharing programs will be promoted by: 1) participation in the Caravan program, 2) priority parking for carpools and vanpools, and 3) on-site information provided through the transportation coordinator.

Efficiency of the area's current and future roadway network will be maximized through: 1) construction traffic management, 2) Signalization of the site entrance/Southampton Street intersection, the full cost of which will be contributed by the Proponent, 3) signalization of the Southampton Street/SE Expressway northbound on and off ramp intersection, with 31% of the cost to be contributed by the Proponent, and 4) provision of off-street loading and parking queuing.

Visual Environment - the proposed project will dramatically enhance the visual environment of the community by transforming an abandoned industrial site into an attractive and vital workplace. Not only will the buildings, themselves, contribute aesthetically to the environment, but the open space surrounding the buildings will form the kind of urban greenspace not currently present in the vicinity. This quality environment is intended to establish a pattern for the character of future improvement and investment in this community.

Community Relations - The following lines of communication will be established to promote continuing community access to information regarding the Project: 1) a periodic newsletter will be published which will inform neighbors of progress on the Project, 2) a community liason will be named as a contact person for community inquiry, and 3) a community access telephone number will be provided as a round-the-clock means for communication.

Comment #3:

The number of trips generated by the Project needs further analysis.

Response:

The revised design of the Project with changes to some accessory spaces has resulted in a comparable gross square footage of the buildings of 580,000 sq.ft. (from 554,000 gsf previously). As described in the DPIR/DEIR, the modal split with the shuttle service to Andrew Station is expected to be 30%. With additional transit promotion as urged by several reviewers, the transit usage is expected to increase to 32%.

While the surveyed employee density rate for biomedical facilities is 1.8 persons for 1,000 sq.ft. versus the 2.2 persons per 1,000 sq.ft. for conventional research and development activities, some concern was raised about the density in this more urban location. Upon review, it is felt that a conservative number would be 2.0 persons per 1,000 sq.ft., for a new project population of 1,160 total employees. These modifications taken together would result in no more than a 7%-9% increase in total site entering or exiting traffic, or 20-25 vehicles over the Build conditions reported in the DPIR/DEIR. Since these vehicles will be distributed among a variety of approaches or exit routes, the increase in vehicles at any one intersection will not exceed 8 cars, and therefore creates no significant difference from the impacts previously described in the Draft PIR/EIR.

Comment #4:

Analysis must include truck and service vehicle and taxi generation.

Response:

Based on information provided by the Worcester Biomedical Research Center, truck and service vehicles make 12 deliveries per day per 100,000 square feet. Of that amount, approximately 6 vehicles could be considered heavy trucks and 6 vehicles are light trucks or vans. Thus, the Boston Science Center might be expected to generate 35 truck deliveries per day. Of that total perhaps 10%, or four trucks, would be arriving and departing during the peak hour.

There is no comparable information for taxi trips from a biomedical research facility. It might be assumed that some visitors would arrive by taxi, but no more than 5-10 trips per day which would be distributed irregularly throughout each day.

Comment #5:

Provide more information on the shuttle bus (i.e., demand, headways, schedule, hours of operation and specific route.)

Response:

The proposed shuttle service would be operated by a minibus with a capacity of approximately 16 persons. It would provide service between the central courtyard at Boston Science Center entering onto Southampton Street and travelling on Southampton Street to Andrew Square and the MBTA station, following approximately the same route and making the same stop as the MBTA's Bus Route #47 within the Square.

Travel and loading/unloading time between Boston Science Center and Andrew Square is estimated to be five minutes. In order to provide an advantage over walking time from Andrew Square, it is proposed that headways of ten minutes be provided. The number of bus trips within the peak hour would thus be six in each direction. The expected shuttle bus capacity is thus 96 passengers per hour. The total transit demand in the peak hour has been forecast to be 150 persons, some of whom will arrive directly to the site via the existing MBTA bus routes of Southampton Street (Routes 10 and 47), or who will choose to walk from Andrew Square. Monitoring after project start-up will ensure that sufficient capacity will be provided on the shuttle. The shuttle will be in operation with 10 minute peak hour headings from 7AM to 10AM and 3PM to 7PM. From 10AM to 4PM the shuttle will run on an as-needed basis.

Comment #6:

Analyze new trips generated by the Project which will create additional traffic on parallel routes.

Response:

In an effort to investigate the likely usage of alternate routes to the SE Expressway as a result of additional traffic generated by the Project, travel time runs were conducted between the Morrissey Boulevard interchange (Exit 14) and the project site. The routes tested were (1) the SE Expressway to Southampton Street; (2) the SE Expressway to Columbia Road to Dorchester Street to Southampton Street; (3) Morrissey Boulevard to Columbia Road to Preble Street to Southampton Street; and (4) SE Expressway to Columbia Road to Massachusetts Avenue to Newmarket Street to Southampton Street. The travel times for the AM inbound routes and the PM southbound routes were recorded. The averages are shown in the table below:

	<i>ROUTE NAME</i>	<i>TRAVEL TIMES AM</i>	<i>TRAVEL TIMES PM</i>
1.	Expressway	9 minutes	7 minutes
2.	Dorchester Street	10 minutes	9 minutes
3.	Morrissey Boulevard	12 minutes	9 minutes
4.	Mass. Avenue	10 minutes	9 minutes

The SE Expressway provides the most direct route from the south and it also provides the quickest route. It is expected that it will be used by all Boston Science Center traffic.

A concern has been raised about the diversion of existing SE Expressway traffic to alternative routes as a result of the additional Boston Science Center traffic. That additional traffic amounts to 80 to 90 vehicles in the peak hour in the peak direction. The SE Expressway carries approximately 8,000 vehicles in the peak hour in the peak direction. Morrissey Boulevard carries approximately 3,000 vehicles in the peak hour in the peak direction. If the assumption is made that both facilities are at their practical capacity and that only these facilities would be used, it would be unreasonable to assign all of the additional traffic to Morrissey Boulevard, since it too has capacity constraints. Based on a relative assignment and their respective peak hour volumes, it would be expected that 65 vehicles would be added to the SE Expressway and 25 vehicles would be added to Morrissey Boulevard. Since there are other alternative routes, the actual amount of traffic diverted to Morrissey Boulevard might in fact be less. The sensitive Columbus Circle roadway would, therefore, be expected to have traffic increased by no more than 25 vehicles in the peak hour as a result of the Project.

It should be noted that even this analysis is based on the assumption that all existing peak hour trips need to occur in the peak hour. During the SE Expressway reconstruc-

tion project, it was found that acceptable flow conditions could be maintained because discretionary trips on the Expressway were not made during the peak hours. It would require only a 1% shift in Expressway traffic to absorb the Boston Science Center traffic within its existing capacity.

Comment #7:

Explain how the Project's traffic was incorporated within the peak hours of each of the nine (9) intersections; include the AM and PM peak hours for the Project (Table 1).

Response:

The peak hours shown in Table 1 are the peak hours used in the analysis of traffic for the Project. While it admittedly would not be physically possible for the project peak hour traffic to exactly coincide with all of the peak hour periods shown in Table 1, those periods were sufficiently close to each other; and recognizing that the occurrence of peak periods may vary, the analysis was performed with the conservative assumption that peak hour project traffic would coincide with peak hour intersection traffic.

Comment #8:

Explain how the Level of Service in 1991 at the intersection of Southampton Street/ Southeast Expressway northbound ramps improves in the Build condition over the No-Build condition (Table 11).

Response:

Table 11 is in error for the movement in question. The left turn from the Southeast Expressway northbound off-ramp to Southampton Street remains at LOS F under the Build condition as indicated in the capacity analysis worksheets included in the Appendix to the Draft PIR/EIR.

Comment #9:

If the number of trips generated increases as a result of a more precise measure of employee density (See Comment #1), then measures to address the increased parking demand must be proposed.

Response:

Based upon adjustments to the building design, on efforts to increase transit usage and to sensitivity analysis of employee density, it is estimated that for 580,000 gross square feet of biomedical research space employing 2 persons per square foot, with transit use of 32% and a vehicle occupancy of 1.2 persons per automobile, that 607 parking spaces would be required. The revised design of the building will provide 626 spaces.

Comment #10:

Identify which parking spaces are devoted to employees, visitors, van pools and shuttle bus.

Response:

As shown on the parking plan shown in Figures 7-9, there are 19 spaces for visitors located on Level P-1 and 607 spaces for employees located on the three parking levels, of which 6 spaces are for van pools located on Level P-1; and 20 spaces for carpools located on Level P-1. The shuttle bus will be in continuous service from 7-10 AM and from 3-7 PM. During the midday when the shuttle service is operating on an as-needed basis, no storage will be needed because the bus must remain accessible. Overnight storage of the shuttle bus will be provided in the loading area.

Comment #11:

A sensitivity analysis must be conducted which qualitatively compares the wind impacts of a new design (i.e., lower building height for the eastern component) to the impacts of Option A.

Response:

A qualitative review of the currently proposed Boston Science Center design indicates that the wind flow patterns around the Proposed Project as revised will be similar to those shown for 'Option A', the previous proposal (Figures 21 to 28 in the DPIR/DEIR). The wind speed increases predicted to occur may differ slightly due to the difference in building heights between these two design options. The 32' decrease in building height of the east component of the revised plan will marginally reduce the amount of wind downwashed into the courtyard and grade level areas along the north, east and south facades of that building. Therefore, pedestrian wind conditions, slightly better than those noted for the previous proposal, can be expected in these areas.

The mechanical penthouse of the west building component for the Proposed Project as revised has been shifted to the southwest corner as compared to the central location identified in Option A in the Draft PIR/EIR. Although this design modification slightly increases the height of the proposed building face at this corner, it is unlikely that wind conditions at the base of this structure will be significantly different than those expected with Option A.

In the remaining pedestrian areas around the proposed development, pedestrian level wind conditions are predicted to be similar under either alternative. Included in these areas is the pedestrian route between the development proposal and Southampton Street, which is situated in the lee of either development proposal for most wind directions from the southwest and southeast quadrants. As a result, pedestrians walking to

and from Andrew Square should find wind conditions better than existing site conditions once the proposed building is constructed. Wind conditions along the Southampton Street sidewalk in the lee of the proposed development are predicted to be suitable for most pedestrian activities.

Comment #12:

Times for June 21st and September 21st on page 81 should be Daylight Savings Time.

Response:

The table shown on page 82 of the DPIR/DEIR should be as follows:

March 21st	EST	9:00 AM	12:00 Noon	3:00 PM
June 21st	DST*	9:00 AM	12:00 Noon	3:00 PM
September 21st	DST*	9:00 AM	12:00 Noon	3:00 PM
December 21st	EST	9:00 AM	12:00 Noon	3:00 PM

* The times of the shadow patterns illustrated for these times of the year were incorrectly identified as Eastern Standard Time (EST) in the DPIR/DEIR.

Comment #13:

Analysis shown in Tables 16 and 17 must indicate CO concentrations at the Southampton Street receptors without mitigation.

Response:

Without traffic mitigation measures, the results of the air analysis under Build 1991 conditions at affected sensitive receptors along Southampton Street are as follows:

<i>Intersection</i>	<i>Receptors</i>	<i>1 HR/ppm</i>	<i>8 HR/ppm</i>
Southampton St/ Melnea Cass Blvd	Bess Eaton Doughnuts	10.3	5.4
Mass.Ave/SE Expressway Ramps	Park	15.8	8.0
Southampton St/SE Expressway On-Ramp Southbound	Sidewalk	9.0	5.1
	BSC Courtyard	6.3	3.7
	NE Corner of BSC	6.9	4.0

Comment #14:

Differences in worst-case wind directions for the same receptor locations for the different cases (Existing, 1991 No-Build, 1991 Build) must be explained.

Response:

In many instances, the reported peak CO concentration occurs at numerous wind angles. For instance, the eight-hour carbon monoxide concentration of 3.3 parts per million at the northeast corner of the Boston Science Center occurs from 0 to 90 degrees. Only one wind angle was selected to show general wind direction (e.g., north-east) for the worst-case carbon monoxide concentration.

Comment #15:

Provide more information on the height and location of the garage exhaust vents.

Response:

Below grade parking level exhaust will be collected through a vertical duct system and discharged horizontally at the underside of the first occupied level. The discharge will be a minimum of 10'-0" above adjacent grade and will be arranged to discharge in a manner which does not create a nuisance at the pedestrian level.

Comment #16:

Describe any changes in the garage exhaust system which may be caused by refined assumptions in the trip generation section.

Response:

The parking garage for each building consists of three (3) levels, one below-grade (P-B) one at-grade (P-1) and one above-grade (P-2). The combined lower levels have a capacity of 244 vehicles, the grade-level has capacity for 197 vehicles, and the above-grade level has capacity for 185 vehicles. One grade-level entrance/exit serves each building from the south side. A roadway wraps the south and west side of the building, connecting the garage entrances to Southampton Street and the southbound Southeast Expressway Ramp/Southampton Street Service Road.

Level P-B will be completely enclosed with ventilation, supplied by a mechanical ventilation system, for both supply and exhaust. Levels P-1 and P-2 will be partially open and naturally vented through the walls of the facility. The natural ventilation for P-1 and P-2 levels will be locally supplemented by a mechanical exhaust system to adequately ventilate any isolated stagnant areas of those parking levels.

The parking level at-grade consists of 40,050 sf of vehicle area in Building A and 33,025 sf of vehicle area in Building B for a total area of 73,075 sf (See Figure 8). Building A has capacity for 114 vehicles and Building B has capacity for 83 vehicles, for a total of 197 vehicles on this level. This level will be partially open to the outside. Natural ventilation has been proposed through punched ventilation grills in the walls of each structure. The open area is approximately 2,970 sf for Building A and 1,800 sf for Building B, totalling 4,770 sf for both P-1 levels. The entrance/exit points to each building are located on the south side of this level.

The parking level above-grade consists of 38,150 sf of vehicle area in Building A and 35,075 sf of vehicle area in Building B for a total area of 73,225 sf (see Figure 9). Building A has capacity for 98 vehicles and Building B has capacity for 87 vehicles, for a total of 185 vehicles on this level. Natural ventilation will be provided in the same manner as described above for P-1. The open area is approximately 3,350 sf for Building A and 4,550 sf for Building B, totalling 7,900 sf for both P-2 levels.

The underground parking level in Building A will have a vehicle area of 50,625 sf and a capacity for 146 vehicles. Building B has 39,000 sf of vehicle area and a capacity of 98 vehicles (See Figure 7). Each building will be mechanically ventilated with a total volumetric air supply of 54,000 cubic feet per minute in Building A and 40,000 cubic feet per minute in Building B in a continuous operation mode. The air supply will be balanced by a mechanical exhaust system consisting of six (6) exhaust fans rated at 9,000 cubic feet per minute for Building A and four (4) exhaust fans rated at 10,000 cubic feet per minute for Building B. The supply air intake for each building will be located at parking level P-1 along the north and south perimeter walls. The exhaust fans will be located at interior walls on the P-B level and the discharge duct will rise vertically to the P-2 level and discharge horizontally at the underside of level 1. The system is proposed to operate continuously.

Comment #17:

Conduct a qualitative comparison between the air quality impacts generated by the new design and those generated by Option A.

Response:

The new design will increase the parking capacity of the garage by approximately 18 percent. However, a higher number of vehicles will be parked at levels (P-1 and P-2), which will be provided with natural ventilation. Also, fewer vehicles (244 as opposed to 340) will be parked underground. Under these circumstances, fewer vehicles requiring mechanical ventilation and the majority of the garage having natural ventilation, will result in a decrease in carbon monoxide concentrations at downwind-sensitive receptors.

During peak hours of traffic operation, a few more vehicles which will exit the garage. However, these additional vehicles will be distributed among a variety of approaches

or exit routes. The increase in vehicles at any one intersection will not exceed 8 cars. This increase in vehicular carbon monoxide exhaust will be less than one (1) part per million in either the one-hour or eight-hour condition at any of the off-site sensitive receptors. Therefore, the increase in vehicular travel from the new design will not result in exceedences of the NAAQS.

Comment #18:

Clarify whether traffic-related contributions were included in the total (Table 19).

Response:

With respect to Table 19, the methodology of calculating the exhaust emissions from the parking garage has followed the recommendation of DEQE and used the Virtual Point Source method. The background concentrations were included after the dispersion calculation was used to predict the concentration at a location downwind. The overlap between the concentration predictions from the garage and off-site traffic was not considered in the analysis.

Comment #19:

Explain why there appear to be some violations at the P-2 level in Table 20.

Response:

Table 20 has been revised for greater clarity (see Appendix D). However, the values presented remain the same and do not violate any standards at the P-2 level, or any other level, or as a total of both levels.

Comment #20:

Garage ventilation rates must be set to limit the CO concentrations to 35 ppm.

Response:

Refer to above response (#19).

Comment #21:

Provide a more detailed description of the proposed exhaust system and potential downwash.

Response:

In general, the air handling equipment for the buildings will be located on the penthouse levels and, in the case of Building A, also at the P-2 level. The air intakes are located on the sidewalls of the lobby levels and at Level 7 and 5 of the A and B building, respectively, as well as at the lobby levels of each building. All building and fume hood exhausts will exit from the roof of the mechanical penthouse.

A schematic air analysis of the relative location of outside air intake and fume hood discharge was completed. The basic guidelines utilized to make the initial determinations of intake and stack locations were:

1. Minimum total separation (horizontal plus vertical) of 25'0" between any intake and discharge.
2. Average height of stack to be 8'0".
3. Minimum exhaust discharge velocity of 1,700 FPM.
4. Typical wind wake region patterns created by wind flow around the buildings.

Relying upon the above criteria, the location of the fume hood discharge will be centered at six locations in each building. The fume hood discharges will be located a minimum of 30 feet horizontally from the perimeter edge of the building. All outside air intakes will be located in a vertical wall approximately 2'0" above the floor of the mechanical penthouse. Based upon a louver height of 7'0", the top of the louver will be approximately 5'0" from the top of the roof. Then, the total separation between intake and discharge will be approximately 35'0", thereby exceeding the above minimum separations.

Wind flow around the buildings produces wake areas of low mean wind and associated turbulence. The size of the wake depends on the dimensions of the buildings. In the case of the Boston Science Center, there are essentially two buildings located near to one another. The long axis of the buildings is in the east-west direction. Wind from the west will create a wake region on the lee side of the west building. The reverse condition may occur for winds from the east. The size of the wake region on the lee side of the building and its effect on the location of building outside air intake and the environment at pedestrian level will be fully evaluated using modelling at a subsequent phase of the project development.

Where necessary, mitigation procedures to minimize the impact of discharge from general fume hoods (exhaust discharge that does not require special handling) will be implemented, such as: 1) increases in stack discharge velocity (up to 2,500 FPM), 2) minor adjustment of stack heights and, 3) relocation of discharge within the pent-house roof plan. For fume hood discharge requiring special handling, appropriate terminal devices, such as filters, collectors, scrubbers, and other similar devices will be employed as required to meet federal, state and local standards.

Comment #22:

Analyze the impact on ground movement/settlement from the removal of existing piles on-site.

Response:

Only those piles which come in conflict with new piles which need to be driven may require removal. Prior to removal, all efforts will be made to reconfigure the new piles and/or pilecaps in order to avoid the necessity for removal of the pre-existing piles. Therefore, a minimum amount of pile removal will be taking place and the expected ground movement and ground settlement which could result from that removal should be insignificant.

Comment #23:

Describe Proponent's commitment to the various construction mitigation measures.

Response:

The following mitigation measures will be employed by the Project Proponent:

- (1) mechanical, non-explosive demolition techniques were used to remove existing buildings;
- (2) inspection of all construction equipment to ensure that noise mufflers are in place and in proper operating condition;
- (3) exposed site surfaces will be wetted on a regular basis to minimize dust;
- (4) location of adequate storage away from Southampton Street in order to minimize impact on areas of pedestrian activity;

-
- (5) coverage of delivery trucks carrying loose materials in order to minimize spills. Southampton Street and its adjacent site will be cleaned regularly;
 - (6) specific performance criteria will be imposed on the contractor pertaining to excavation, dewatering and foundation construction. The criteria will require maintenance of preconstruction groundwater levels outside the site and will limit ground movements due to pile installation and other activities;
 - (7) scheduling of typical construction hours between 7:00 A.M. and 3:30 P.M. in order to minimize travel during peak commuting hours;
 - (8) use of a construction fence around the site in order to partition such areas from pedestrian activity or surrounding land uses; and
 - (9) proper disposal of all demolition/construction waste has been and will be disposed of by licensed haulers in accordance with all pertinent state and city regulations.

Comment #24:

Identify the disposal site for the demolition waste.

Response:

All debris from 301 Southampton Street demolition activities has been transported to a recycling yard in Everett, Massachusetts. In Everett, all debris has been separated into wood, concrete and light iron piles. Each load is trucked by independent drivers to legal land fills in the New York area. Portions of the solid fill debris have been taken to Ipswich, Massachusetts, and portions of the blacktop have been taken to Stoughton, Massachusetts.

Comment #25:

Provide more information on the specifics of the rodent control program.

Response:

A pest control contractor will be engaged. The pest controller is to familiarize himself with the construction site and schedule in order to best provide a rodent (rat and mouse) control program. The pest control contractor will be registered in the Commonwealth of Massachusetts as a commercial pesticide applicator. The pest controller will submit to the Proponent the names of the applicators along with copies of their work experience on construction sites.

All rodenticides proposed to be administered shall be registered with the United States Environmental Protection Agency and the Commonwealth of Massachusetts. Material Safety Data Sheets of all rodenticides will be submitted to the Proponent and kept on file at the site. All rodenticides shall be placed in rodent burrows and harborages. There will be no open, exposed rodenticides.

After each service visit, the inspector will furnish a receipt to the Proponent listing rodent activity found, rodenticides administered, and recommendations. The pest controller will respond to any report of observed activity between scheduled visits. Inspections and treatments will take place monthly during construction. A final inspection will be conducted at the completion of the project.

Comment #26:

Develop a scheme which is comprised of two asymmetrical structures.

Response:

The current project as proposed in this document is asymmetrical in plan, section and in elevation, providing two distinctly differing yet decidedly complimentary building forms. In place of the mirror image site plan scheme for the two buildings, the current proposal shows two H-shaped buildings which have been augmented to conform with the site. Thereby, the Proposed Project has become both more visually diverse and more refined.

In responding to the irregular shape of the site, the floorplates at ground level of each building now vary by about 10,000 square feet, with the ground floor of the eastern building consisting of 53,525 sf and the ground floor of the western building totalling 63,125 square feet (see Figure 10). In section, the buildings differ primarily in height as well as in roof profile (see Figures 15-17). While the western building has a height of 147 feet, the eastern building has a height of only 119 feet. With respect to the roof profile, the cooling tower of the western building is offset to the southwest corner of the building, whereas, the cooling tower of the eastern building is located at the central portion of the building. Again this adds to the variety and drama of the buildings as viewed from the exterior.

Facade treatments, including materials and fenestration, continue the asymmetry between the buildings. The window patterns of the western building vary from elevation to elevation, while the eastern building's elevations are more regular. The eastern-most building is primarily brick with cast stone and metal panel detailing. The western building is primarily cast stone with brick, metal panels and glass curtainwall detailing. While the materials and window openings of the two buildings are in contrast with each other, there is also continuity in the detailing of the two facades in that they echo each other in materials and in form.

Comment #27:

Massing of the two components must be further broken down to create the impression of four masses rather than two.

Response:

By employing an H-shaped configuration, each building is comprised of two wings and a bridge which creates the effect of two primary components within each building. By recessing the bridge between the two wings in each of the buildings, this expression of two components is emphasized. The roof lines of the buildings emphasize this expression of two components in different ways for each of the two buildings. First, the eastern building separates the two wing masses with a higher arched bridge, made up of the cooling tower which has become an ornamental connection between the two building wings. The cooling tower on the western building, on the other hand, is off-set over one of the wings, creating a dominant wing in contrast to the more regularly shaped secondary wing. The detailing of the facades further delineate each of the two buildings into their two subcomponent wings.

Comment #28:

Heights of the two building components must differ.

Response:

The Proposed Project, as revised, is comprised of an eastern building which has a height of 119 feet to the top of the mechanical penthouse, and a western building with a height of 147 feet to the top of the mechanical penthouse.

Comment #29:

The site plan must be modified so that the function of roadways is not duplicated.

Response:

The northern portion of the roadway which paralleled the Southeast Expressway/Ramp, Southampton Street Service Road has been removed. In its place will be an eight foot wide access way to be used by emergency vehicles only. This access way will be comprised of grass paver block and will have the appearance of a lawn. The overall result is that a more gridlike street pattern has been established within the project site, replacing the previous plan's totally encompassing ring road, which provide access to the buildings, loading areas, service areas and parking entrances.

Comment #30:

The cul-de-sac which bisects the Project must become a road with a more public character that extends north and connects directly to the Southampton Service Road.

Response:

To determine the feasibility of connecting the cul-de-sac with the Southampton Street Service Road/Southeast Expressway Access Ramp, to the north of the project site, meetings were held with the Executive Office of Transportation and Construction and with the Boston Transportation Department on March 24, 1989 and March 8, 1989, respectively. Each agency expressed reservation about the safety and usage of such a connection for the project's vehicles at the mid-point of an access ramp to I-93. Since a curb cut would be required from EOTC and is not anticipated to be granted per the discussion mentioned above, a pedestrian rather than a vehicular roadway connection will be made to the Southampton Street Service Road. To the extent practical, this will be accomplished by replicating the visual image of the roadway south of the cul-de-sac and extending it north of the cul-de-sac. Its usage of the northern portion, however, will be limited to pedestrians and emergency vehicles. Suitable paving and safety details will be provided during design development.

Comment #31:

The ring road on the western side of the site must have the character of a boulevard.

Response:

The access drive has been relocated further toward the western boundary of the property. In addition, a planted median separates the inbound and outbound vehicles providing a boulevard of urban greenery at the project's entrance. The project's transformers have been relocated within the building envelope to provide additional open space at the perimeter of the building.

Comment #32:

The Project's transformer must be moved to within the building envelope in order to provide more thoughtfully conceived, user-friendly, open spaces.

Response:

Together with Boston Edison Company, the Proponent reexamined the interior location alternatives and specifications for the transformers. As a result, the transformers have been moved inside of the buildings in this proposal, providing additional useable open space.

Comment #33:

The eastern and western components must be set farther apart to provide more usable open space.

Response:

The distance between the eastern and western buildings has been increased from 55 feet in the prior proposal 70 feet in the currently proposed project.

Comment #34:

Provide continuous sidewalks around both buildings.

Response:

Sidewalks are being provided around both of the buildings (see Figure 6).

Comment #35:

Additional landscaping must be provided between the western component and the railway embankment and between the Project and the Southampton Service Road.

Response:

Trees have been added both due to addition of the boulevard to the west and with the removal of the ring road to the northern edge of the property which will enhance the urban green space aspect of the building's perimeters. These areas will be studied in further detail, and in a larger scale, during design development.

Comment #36:

Provide more information on electrical extensions or upgradings which may be required.

Response:

Electric and gas load demands were developed at a conceptual and schematic design level. These loads were discussed with the respective utility companies (Boston Edison and Boston Gas) regarding impact on their distribution systems. Both utility companies indicated that the Project will not have an adverse impact (See Appendix).

Comment #37:

Provide more information on electrical service, including such items as emergency generators, fire alarm system connections and special provisions for potential tenants.

Response:

The utility company will distribute a 13.8KV, 3-phase, 60-cycle electrical service to the Project. Utility company transformers reduce the high-voltage service to the building voltage of 277/480 volts, 3-phase, 60-cycle, 4 wire. Electricity will then be extended throughout the Project in a steel conduit raceway system for horizontal distribution and "buss duct" for vertical distribution to electrical closets. Metering of electricity will be arranged to provide a common house meter for mechanical equipment, elevators, public area lights and miscellaneous electric power, garage lighting, etc. Tenant light and power will be either separately metered by the utility company meters or check-metered through a computerized metering system. Each electric closet will include a high-voltage electric panel (277/480 Volts), 277-480 Volt to 120/280 Volt transformer and a low voltage electric panel to distribute power to electric devices in the building.

In addition to the normal utility company electric power, an emergency electric power system will be provided. Emergency power will be generated by a diesel-driven electric generator. The emergency power will be distributed throughout the Project by a separate electrical distribution system to emergency lighting and equipment in the buildings.

Dedicated communication equipment spaces will be incorporated as part of the Project to meet special tenant telephone and computer requirements. The communication equipment closets will be arranged vertically to provide easy access to a primary communication room on one of the parking levels for final connection to the New England Telephone systems.

Comment #38:

Provide more detail on how projected water demands will be accommodated.

Response:

A separate domestic water and fire service will be extended to the building from the 16" public water distribution system. A central domestic water pumping system will receive the service from the site distribution and provide adequate pressure and capacity for distribution of cold water and hot water throughout the building to all domestic water-consuming devices, including cooling tower make-up water. The domestic water demand will not impact the capacity of the 16" public water main.

The fire service will also be received at the building by a central electric or diesel-driven fire pump system. The fire pump will have the capacity to provide between

1150 GPM and 1350 GPM fire flow with a pressure of 65 PSIG at the top floor of the building. The emergency fire flow of 1150 to 1350 GPM will not adversely impact the capacity of the 16" public water main.

Comment #39:

Provide more information on how building tenants will be required to apply for all necessary permits and to identify special measures to treat laboratory wastes to sewer system standards prior to discharge (i.e., mechanism, language and monitoring compliance).

Response:

As distinct from the base building plumbing system, discharge from laboratory sinks and equipment will be connected to a sanitary system which is separated from the general building sanitary system. The laboratory tenants' waste systems will be conducted through approved chemical treatment facilities to a test manhole located outside of the building. After flowing through the test manhole the discharge will be connected to the normal sanitary sewer. The test manhole, will allow for periodic monitoring of laboratory wastewater prior to its discharge connections to the public sewer system.

Furthermore, the Proponent shall include in Project leases the following language, or language substantially similar to it:

Compliance With Laws

The Tenant shall be responsible for identifying all federal, state and local laws, ordinances and regulations ("Laws") which apply to the Tenant's use and occupancy of the Leased Premises, for applying for and obtaining all permits, consents, variances, licenses and approvals ("permits") which are required by such Laws, for complying with any and all conditions, protocols, public notice requirements, reporting requirements, record-keeping requirements, mitigation measures, safety measures or other terms or provisions contained in such permits or in such laws, for making any physical modifications to the Leased Premises required to comply with such Laws or permits (subject to the other provisions this Lease concerning changes, alterations or improvements to the Leased Premises) for maintaining such permits in full force and effect in accordance with their terms, for renewing such permits as required by the Laws or by the agencies which implement any of such Laws ("agencies") and for taking any and all such acts as are necessary to ensure that Tenant's use and occupancy of the Leased Premises is conducted in accordance with the requirements of the Laws. The Tenant shall maintain such copies of the permits and such records of its compliance with the Laws as are required by the Laws or by any of the applicable agencies.

**III. LETTER 2: EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
CERTIFICATE ON THE DRAFT EIR**



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

MICHAEL S. DUKAKIS
GOVERNOR

JOHN DEVILLARS
SECRETARY

LETTER #2 **FILE COPY**

W/C 2-22-89 PL

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Boston Science Center
PROJECT LOCATION : Boston
EOEA NUMBER : 7111
PROJECT PROPONENT : Southmed Limited Partnership
DATE NOTICED IN MONITOR : January 11, 1989

The Secretary of Environmental Affairs herein issues a statement that the Draft Environmental Impact Report submitted on the above project adequately and properly complies with the Massachusetts Environmental Policy Act (G.L., c.30, s.61-62H) and with its implementing regulations (301 CMR 11.00).

This project consists of 609,000 square feet of biomedical and office space on Southampton Street in South Boston with structured parking for 530 vehicles.

1 I wish to commend the proponents on their commitment to
2 provide shuttle bus service between the Andrews Square T station
and their project. The FEIR should provide more detail on the
schedules for the shuttles and should provide more detail on
other incentives for transit use such as parking prohibitions for
single occupant vehicle and preferential parking for van pool
vehicles.

3 The FEIR should discuss an alternative access scheme that
would move the site drive easterly and the central artery ramp
westerly to provide more separation and should examine relocating
the ramp to allow for one-way traffic.

4 The FEIR should also examine the weaving conditions at the
service road and the southbound ramp of the artery under existing
and 1991 build conditions. Continued communication with the
MDPW, Central Artery Staff, and Secretary Salvucci's office will
be useful here.

5

The Boston Transportation Department has commented on some inconsistencies in nomenclature that could lead to misunderstandings in the traffic analysis. These necessary corrections and clarifications are identified in the attached comment and should be made in the FEIR.

6

I find that the Southampton Street/Expressway NB ramps show a deterioration in level of service due to the project. Given this condition, the developer should consult with EOTC with regard to mitigation at this location.

7

The FEIR shall identify mitigation for increases in wastewater flow from the project both in terms of the collection system and the receiving system. I suggest consultation with the MWRA with regard to this requirement.

February 16, 1989

DATE

John DeVillars, Secretary

Comments received: EOTC, MWRA, DEQE-DAQC, BRA, Boston
Transportation Department, MAPC

JPD/rf

**LETTER 2: EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
CERTIFICATE ON THE DRAFT EIR**

Comment #1:

Provide more detail on the schedules for the shuttle bus service.

Response:

See response to BRA Letter, Comment #5.

Comment #2:

Provide more detail on other incentives for transit use.

Response:

In order to increase transit use, the Proponent will appoint a Transportation Coordinator for the Project. The Transportation Coordinator will make available to all tenants and employees information on transit routes, schedules and fare rates. This information will discuss services provided by the MBTA and the building shuttle service. Tenants and employees will receive detailed information on MBTA passes, which will also be offered for sale in the building. Tenants will be encouraged to consider subsidizing MBTA passes.

Comment #3:

Discuss an alternative access scheme that would move the site drive easterly and the Central Artery ramp westerly.

Response:

As discussed in the revised project description and shown in Figure 6, an alternative for site access has been developed by the Proponent which addresses the concerns of the State and City transportation agencies in a manner different than described in the comment. The site entrance has been moved to the western boundary of the site, creating the maximum separation possible from the Southeast Expressway southbound entrance ramp. The intersection of the site drive and Southampton Street will be signalized as was discussed in the DEIR/DPIR. This matter was discussed with EOTC on March 24, 1989 (see Appendix) and the revised access was found by EOTC to be satisfactory.

While the location or change in operation of the Expressway ramp is not within the ability of the Proponent to change. The internal circulation of the Project does not require nor does it promote additional two-way traffic on this ramp. Two-way traffic on the ramp is only associated with the adjacent Sears Distribution Center. The Proponent recognizes that one-way southbound operation of traffic on the ramp would improve its safety and therefore would support such a change if it were to be instituted by the State.

Comment #4:

Examine the weaving conditions at the service road and the southbound ramp of the Artery under Existing and 1991 Build conditions.

Response:

The weaving conditions along the Southampton Street Service Road at the off/on southbound ramp of the SE Expressway have been analyzed as requested for existing No-Build and Build conditions.

Weaving volumes can be identified from the interaction volumes taken at either end of the service road. It is assumed as a worst-case under existing conditions, that there is no non-weaving traffic in that section. Thus, all traffic from Southampton Street is weaving to the on-ramp and all traffic to Boston Street is weaving from the off-ramp.

The weaving analysis from the 1985 Highway Capacity Manual was not used because the section is less than the three-lane freeway section established in the Manual. It is felt that the section more closely approximates weaving conditions at a rotary section, thus the CIRCAP program (MC Trans Center, University of Florida, 1988) was used. The results of the analysis are shown in the table below.

	<i>Major Volume</i>	<i>Minor Volume</i>	<i>Critical Gap</i>	<i>V/C</i>	<i>LOS</i>
<i>Existing AM</i>	497	122	4 secs.	.34	A
<i>Existing PM</i>	540	386	4 secs.	.69	B
<i>No-Build AM</i>	513	125	4 secs.	.35	A
<i>No-Build PM</i>	557	400	4 secs.	.71	C
<i>Build AM</i>	513	133	4 secs.	.36	A
<i>Build PM</i>	527	513	4 secs.	.83	D

The analysis shows that the Build condition during the afternoon will be an acceptable Level of Service D.

Comment #5:

Correct inconsistencies in nomenclature in the traffic analysis.

Response:

The issue of nomenclature is addressed more fully in the responses to the Boston Transportation Department letter, Comment #'s 1-4.

Comment #6:

Consult with EOTC regarding mitigation at the Southampton Street/Expressway NB ramps.

Response:

The unsignalized intersection of the Southeast Expressway (I-93) northbound entrance and exit ramps with Southampton Street is shown under the existing and No-Build conditions to operate at a failing Level of Service for vehicles turning left from the exit ramp. This is an unsafe condition which causes vehicles waiting in a queue to extend back toward the SE Expressway. It was recommended in the DPIR/DEIR that a traffic signal for the intersection be installed. The installation of a traffic signal at this location would improve the No-Build 1991 traffic condition to LOS B in the AM with a V/C ratio of .57.

The additional traffic associated with the Project would result in delays of LOS C with a V/C ratio of .88. The capacity consumed by the Project is thus 31% of the total capacity. The Proponent proposes to pay an amount equal to 31% of the total design and construction cost of the signal installation.

Comment #7:

Identify mitigation for increases in wastewater flow from the Project both in terms of the collection system and the receiving system.

Response:

The design and construction of the plumbing systems in the building will incorporate water conservation devices (flow restrictors) in lavatories, showers, water closets, dishwashers, etc., to minimize water consumption in the buildings and reduce the impact on distribution and collection systems serving the site.

Both the Massachusetts Water Resources Authority (MWRA) and Boston Water and Sewage Commission (BWSC) were contacted concerning the needs and impacts of

the proposed Project on March 24, 1989 and April 4, 1989, respectively. The MWRA reinforced the need for conservation, as outlined above, and referred the Proponent to the BWSC for comments on other mitigation. Subsequently, the BWSC advised the Proponent that the project had been reviewed and that comment was deemed unnecessary at this time, though continued review of proposed connections in greater detail will be appropriate at a later date during the building permitting process. The Proponent will work with the BWSC at that time to resolve any concerns.

IV. OTHER COMMENT LETTERS RECEIVED ON THE DRAFT PIR/EIR



The Commonwealth of Massachusetts

Executive Office of Transportation & Construction

Office of the Secretary **LETTER #3**

10 Park Plaza, Room 3510

Boston, MA 02116-3969

Telephone 978-7000

TTL (617) 973-7306

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FEB 14 1989

OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

Michael S. Dukakis
Governor
Frederick P. Salucci
Secretary
and
M.B.T.A. Chairman

() E.N.F. (X) DRAFT E.I.R. () FINAL E.I.R. No.: 7111

DATE: 01-11-89

DATE RECEIVED: 01-11-89

COMMENTS DUE: 2-10-89

TOWN/CITY:

BOSTON, MASSACHUSETTS

PROJECT PROPONENT:

SOUTHMED LIMITED PARTNERSHIP
% CONGRESS GROUP VENTURES
ONE MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS

PROJECT DESCRIPTION: BOSTON SCIENCE CENTER, 301 SOUTHAMPTON STREET, BOSTON, MASSACHUSETTS. The proposed is the construction of two (2) eight story research facilities in South Boston, Massachusetts which will serve the Boston medical community. The buildings will contain approximately a total of 608,755 S.F. of biomedical laboratory and related office space, 86,200 S.F. of mechanical equipment space and 231,595 S.F. of structured parking which will accommodate approximately 530 vehicles. One level of parking will be below ground and the other will be at grade below the research buildings. The project site contains 5.4 acres of land bounded by the Southeast Expressway to the east, the Sear Distribution Center to the south, the New York/New Haven & Hartford Railroad to the west and Southamptton Street and an access ramp to the north. Currently, the site contains a vacant one story building containing approximately 79,000 S.F. which is currently being demolished and an asphalt paved area of approximately 150,000 S.F..

M.D.P.W.: CURB CUT PERMIT REQUEST

(X) COMMENTS (SEE ATTACHED)

() NO COMMENTS

DATE: 2/3/89

Clifford M. Brown



The Commonwealth of Massachusetts

Executive Office of Transportation & Construction

Office of the Secretary

10 Park Plaza, Room 3510

Boston, MA 02116-3969

Telephone 973-7000

TLL (617) 973-7306

Michael S. Dukakis

Governor

Frederick P. Salucci

Secretary

and

M.B.T.A. Chairman

RECEIVED

FEB 14 1990

OFFICE OF THE SECRETARY
ENVIRONMENTAL AFFAIRS

EOTC Comments on the Boston Science Center DEIR

Boston, MA

EOEA # 7111

The Executive Office of Transportation and Construction has reviewed the DEIR for the proposed Boston Science Center. This project consists of 694,955 S.F. of biomedical laboratory and related office space. The proponent is seeking a MDPW curb cut permit for this project. The DEIR does not address any of the issues raised in EOTC ENF comments for this project. In the FEIR, the proponent is expected to thoroughly examine the requested analysis and potential impacts of concern.

1 Access for this project is proposed at an existing Central Artery southbound ramp. This proposed access is in an area which currently experiences a number of different traffic movements along the service road. Additional traffic along this roadway will only further complicate traffic movements. Therefore, the proponent must thoroughly analyze access alternatives and propose mitigation that will insure acceptable levels of service at impacted areas.

The Central Artery Staff is currently working on preliminary stages of design for the Southampton Street southbound ramp segment of the Central Artery Project. The proponents have met with the Central Artery Staff to discuss potential impacts to the Boston Science Center project. Although there are some minimal conflicts with the proposed circulation road, this issue seems to be resolvable. We are sure that both the proponents and the Central Artery Staff will continue to work together in this regard.

2 As stated in the ENF, the proponent should analyze alternative access schemes to the site such as moving site access further east and moving the existing service road

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FEB 14 1989

EOEA # 7111
DEIR
Page 2

OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

3 (central artery ramp) further west to provide two separate access points; one to the site and one to the ramp. The proponent was also requested to explore possibilities of relocating the ramp to allow for one-way traffic instead of the present two-way traffic flow.

4 Traffic circulation was not identified within the development area roadway network. This should be displayed on a plan to identify truck circulation and vehicle circulation both on the proposed roadways within the development and at the ingress and egress locations of the garage. A one-way internal roadway system may better funnel traffic to egress points. 5 Further, the proponent fails to analyze weaving conditions along the service road at the off-on southbound ramp of the Central Artery. Weaving conditions should be analyzed for existing conditions, 1991 no-build conditions, and 1991 build conditions. Ingress and egress traffic from the Sears site should be accounted for.

6 A sufficient number of trucks currently use the existing service road and additional trucks will be added to this ramp which will serve the site both during construction and after project completion. An analysis of the existing turning radius for right turn truck movements onto Southampton Street at the site and left turn movements from Southampton Street onto the service road should be analyzed. Further, the proponent is 7 recommending a traffic signal at the site. A discussion on the amount of green time allowed to accomodate these turning movements should be included. The level of service and time 8 delays should account for truck movements at the site. Additional time delays should be accounted for for all vehicles exiting the site due to the required turn movements.

9 The proponent is proposing to pay for mitigation at the Southampton Street/site drive intersection, but concludes that mitigation at the Southampton Street/SE Expressway NB ramps should be the responsibilities of others. A drop in level of service is experienced at this location as a result of this development. The proponent is expected to commit to mitigation at this location.

In regard to Transportation Management Strategies, we commend the proponent for committing to providing a shuttle bus

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1-14-89

EOEA # 7111
DEIR
Page 3

from Andrew Station to the site. The proponent should also contact the MBTA to discuss the pass program. This program should be implemented for this development as well, as a means to further encourage employees to use the transit system.

10 The proponent should be aware that the MBTA is considering the possibility of locating a commuter rail station for the Midland Branch in this area. The proponent should coordinate parking and traffic issues with the MBTA to enhance the feasibility and compatibiltiy of such a facility with the project.

11 Finally, EOTC continues to believe that this project is subject to M.G.L., Chapter 40, Section 54A. The proponent should contact the EOTC Railroad Department to discuss this matter.

2/13/89

CONGRESS GROUP VENTURES

March 29, 1989

Mr. Matthew Coogan
Executive Office of Transportation & Construction
10 Park Plaza, Suite 3510
Boston, MA 02116

Dear Mr. Coogan,

As part of our ongoing discussions with the Executive Office of Transportation and Construction, we met with yourself, Mr. James Vears and Ms. Cheryl Soon regarding disposition of our project, the Boston Science Center, and your plans for the Central Artery/Third Harbor Tunnel on Friday, March 24th.

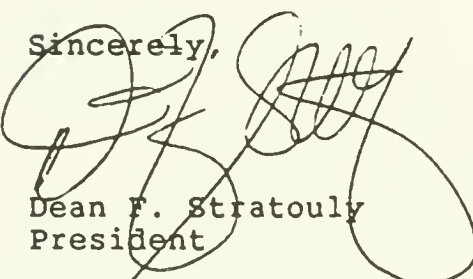
In this meeting we discussed with you clarification of the comment letter dated 2/13/89, submitted by EOTC on our Draft Environmental Impact Report (DEIR), EOE #7111R. Also, we showed you an alternative site access scheme and discussed ways in which we could respond to the comment letter.

The result of the meeting was that you concurred with us that the best arrangement for access to the site would be to move our entry drive to the western edge of the site. With respect to the access ramp to the expressway, we agreed that we would take no action which relied upon its remaining a two-way ramp, and you affirmed that all other aspects of its potential disposition would remain in your hands. Lastly, you expressed concern at the suggestion that the drive which bisects the site could connect to the Southampton Street Access Ramp. You advised us that this would require an additional curb cut from EOTC, which would not be granted.

Also, in a prior meeting with your staff on October 20th, 1988, we were advised of possible alterations to the Southampton Street Access Ramp which would require that we build no closer than twenty five (25') feet to the northeastern corner of our property. As discussed in last week's meeting, we have allowed for this in our current site plan, a copy of which has been sent to Mr. James Vears. No further information on this was available from you at the time of our meeting. We would welcome any further details, as they become available.

We thank each of you for giving myself, Andrea Foertsch, Dan Beagan, and Dave Herzil the opportunity to meet with you in furtherance of the Boston Science Center. Please do not hesitate to contact me if you should need further information regarding our project.

Sincerely,



Dean F. Stratouly
President

cc: Cheryl Soon - EOTC
Jim Vears - Bechtel/Parsons Brinckerhoff
David Herzil - Sasaki
Dan Beagan - Sasaki
Andrea Foertsch - Congress Group Ventures
David Randall, Esq. - Congress Group Ventures

LETTER 3: EXECUTIVE OFFICE OF TRANSPORTATION AND CONSTRUCTION

Comment #1:

Analyze access alternatives and propose mitigation that will insure acceptable levels of service at impacted areas.

Response:

The Proponent met with the EOTC on March 24, 1989 to discuss an alternative for site access on Southampton Street which separates the site entrance from the existing Central Artery southbound ramp to the fullest extent possible (see attached letter). This alternative was found to be satisfactory to EOTC. A secondary egress point at the southeast corner of the property connects with the ramp via an easement across the Sear's Distribution Center driveway. This direct link to the SE Expressway minimizes, to the extent possible, the impact of projects southbound traffic by separating it away from Southampton Street/SE Expressway ramp intersection.

As stated in the DEIR/DPIR, this entrance intersection will be signalized, the full cost of which will be borne by Project Proponent. The proposed operation of the signal is discussed further in comment #7 below.

Comment #2:

Analyze alternative access schemes to the site.

Response:

As described above, an alternative access to the site was developed and found to be acceptable to EOTC. The Proponent has frontage only on Southampton Street and the I-93 (Central Artery, SE Expressway) on-ramp, and is unable to secure alternative access on other roadways. The only access to the site is provided at the Southampton Street driveway. Egress from the site is primarily at Southampton Street with additional egress provided via an easement directly to the ramp.

Comment #3:

Explore possibilities of relocating the ramp to allow for one-way traffic.

Response:

The two-way traffic on the southbound entrance ramp is associated only with the Sears Distribution Facility. Traffic from the Proposed Project does not require and will not use reverse operation on the ramp. The Proponent recognizes that one-way operation of the ramp is desirable and would support its eventual reconfiguration, and will ensure that the design of the project does not preclude this.

Comment #4:

Identify traffic circulation within the development area roadway network.

Response:

The internal circulation system has been revised from the one shown in the Draft EIR/PIR. As shown in Figure 25 of the revised project description, the internal site road no longer completely encircles the buildings. The internal circulation is via a two-way roadway beginning at the western site boundary on Southampton Street, continuing along the western site boundary and southern site boundary. Truck and vehicle circulation is along the same internal roadway with loading docks and parking garage access as shown. Feeding off this roadway is a cul-de-sac which will provide a drop-off location immediately in front of the building lobbies for visitors, handicapped persons, the shuttle bus and taxis.

Comment #5:

Analyze weaving conditions along the service road at the off/on southbound ramp of the Central Artery.

Response:

See response to EOE letter, Comment #4

Comment #6:

Analyze existing turning radius for right-turn truck movements on Southampton Street at the site '98 left-turn movements from Southampton Street onto the service road.

Response:

This comment refers to the potential truck circulation to and from the portion of the roadway on the northern site boundary. The new site drive is a conventional 90° intersection such that right-turning truck traffic could be easily accommodated. The left

turn movements from Southampton Street onto the service road (SE Expressway) are not related to the Project. While these movements are a problem, the Project does not promote this movement; and by signalizing the intersection as a mitigation measure, the conflicts with these movements will be reduced.

Comment #7:

Discuss amount of green time allowed to accommodate turning movements at proposed traffic signal at site.

Response:

The proposed signal to be installed at the intersection of the site drive at Southampton Street would operate on four (4) phases. During the first phase, all westbound Southampton Street movements, including the protected left-turns to the site drive and to the SE Expressway ramp, would be allowed. During the second phase, all movements on Southampton Street would be allowed. During the third phase, all movements from the ramp would be allowed. During the fourth phase, all movements from the site drive would be allowed. The phasing would provide protection for existing movements to and from the ramp as well as to and from the project site drive. The capacity analysis indicates that with the project traffic, the Level of Service would be "B" in both the morning and afternoon peak hours under this signal plan.

Comment #8:

The level of service and time delays should account for truck movements at the site.

Response:

The concern for trucks entering the site causing additional delays is related to the previous design for the site entrance and internal circulation. Under that design, vehicles entering from the west and bound for the western loading dock, as well as vehicles entering from the east and bound for the eastern loading dock, would be required to make extreme switchback turns. Under the revised design, all trucks would move through the intersection in a conventional ninety-degree turn, alleviating this problem. Further heavy truck traffic to the site should amount to no more than 36 two-way trips per day and no more than 10% or four trips, would be entering or exiting in the peak hour. Four trips is approximately the two percent of the exiting PM traffic that was previously used in the capacity calculations.

Comment #9:

Commit to mitigation at the Southampton Street/SE Expressway NB ramps.

Response:

See response to EOE letter, Comment #6.

Comment #10:

Coordinate parking and traffic issues with the MBTA as they relate to a proposed Midland Branch commuter rail station in the area.

Response:

The concept of a Midland Branch commuter rail station has been included in discussions held with EOTC and MBTA representatives on October 27 and December 23, 1988, and also on March 24, 1989. The Proponent will continue to make its plans available to these agencies as they determine the location, requirements and schedule for completion of the station, and will work in cooperation with their effort wherever possible.

Comment #11:

Contact the EOTC Railroad Department relative to being subject to MGL, Chapter 40, Section 54A.

Response:

Based upon recent conversations with EOTC in regard to this requirement, the Proponent acknowledges that the Project is subject to MGL, Chapter 40, Section 54A.

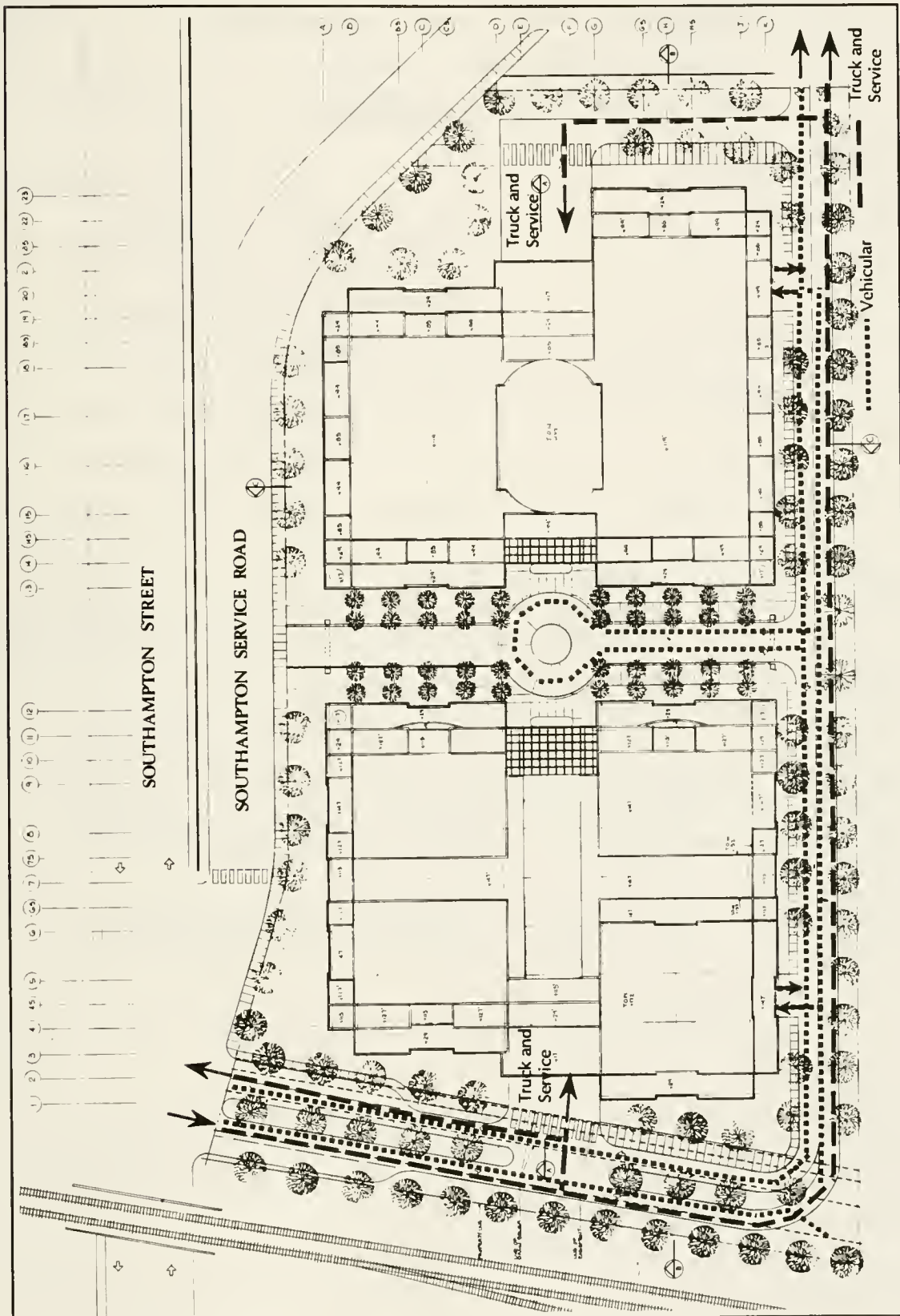


Figure 25 - Vehicular, Truck and Service Access



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Quality Engineering
Division of Air Quality Control

Daniel S. Greenbaum
Commissioner

RECEIVED
One Winter Street, Boston 02108

MEMORANDUM FEB 10 1989

LETTER #4

TO: Secretary DeVillars - Executive Office of Environmental Affairs
OFFICE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS

ATTN: Richard Foster - MEPA Unit

THRU: Christine Kirby - Division of Air Quality Control

FROM: Gary Idleburg - Division of Air Quality Control

DATE: February 9, 1989

SUBJECT: EOEA #7111 Boston Science Center - Boston, MA

The Division of Air Quality Control (DAQC) has received and reviewed the Draft Environmental Impact Report. Based on this review, the DAQC offers the following comments:

1. The proponent has consulted with the DAQC to establish parameters and inputs for an air quality analysis.
2. According to the summary of analysis, there were no modeled carbon monoxide exceedances (8 hr or 1 hr) of National Ambient Air Quality Standards in the "1991 Build" phase of the project ... including mitigation.
3. It appears that impacts from this project will not cause significant deterioration of local traffic conditions and ambient air quality.

If you have any questions please call 556-1032.

GI/efj.

cc: James Neely - DAQC Boston Office
DEQE - NE Region

Boston

Raymond L. Flynn, Mayor

LETTER #5

Feb. 7, 1989

John P. De Villars, Secretary
Executive Office of Environmental Affairs
100 Cambridge St.
Boston, MA 02202

Attention: MEPA Unit

Dear Secretary De Villars:

I am in receipt of the Draft Environmental Impact Report for the Boston Science Center. My department is reviewing the transportation impacts of this project. I would like to make the following comments on the DEIR.

TRAFFIC

1 The names used to describe the various intersections under analysis are not always consistent between the tables and the figures. In particular, the two Southampton/I-93 intersections are variously referred to as Southampton/I-93 south, Southampton/I-93 SB ramp service road, Southampton/SE Expressway ramps, Southampton/SE Expressway NB (and SB) ramp(s), etc. Given the confusion already possible due to Southampton St. having intersections with two different sets of SE Expressway ramps, 2 special care should be given to clarity and standardization in this regard. Also, in Figures 7, 10 and 14, what is in fact access from the Melnea Cass/Mass. Ave/Southampton intersection to the SE Expressway north or southbound is labeled as for northbound only.

3 In tables 2, 3, 10 and 11 there is reference to a "Southampton EB LT" at the intersection with the SE Expressway ramp/service road. There is no left turn for eastbound drivers on Southampton Street at the intersection with the SE Expressway. Apparently what is meant is the left turn from Southampton St. westbound.

4 Tables 2, 3 and 10 seem to have figures representing seconds of delay in the columns labeled "Average Veh."

5 Table 1 displays the peak hours recorded at the different analysis intersections. This is a helpful thing to know, but there should be some discussion of how these findings were taken into account in the project impact analysis. What is the peak hour of the project? Were the project-generated peak hour trips through each intersection added to that intersection's peak hour volumes, even if the intersection's peak would not coincide with the project's?



Richard A. Dimino, Commissioner, Transportation Department
City of Boston/City Hall Square/Boston, MA 02201

6 The DEIR bases its projections of background growth on an assumption of a 1% per year increase in traffic, a factor taken from the Midtown Cultural District Plan. The Newmarket area at present has a much lower level of development than the Midtown Cultural District, as well as very different access to the regional highway network. The DEIR should take such facts into account and, if appropriate, revise the annual traffic increase percentage.

7 The DEIR states (p.46) that no traffic from the project will travel through Columbus Circle. This is true only if the new traffic (25% of the project's total) which the analysis distributes onto the SE Expressway can in fact be accommodated by it. Since the Expressway is already well over capacity, however, it is highly likely that substantial volumes will in fact use Morrissey Blvd. and go through Columbus Circle. The FEIR should make a more realistic assessment of the effect of peak-period spreading from the SE Expressway, and reassign trips to Morrissey Blvd. and other local streets as necessary.

8 In Table 11's comparison, the left turn from the SE Expressway NB off-ramp to Southampton St. is projected to function better (LOS E) with the project than without. This should be explained.

The paragraph at the top of page 52 seems to be the victim of a typesetter's error.

9 The second paragraph on page 52 states that only five peak hour movements under the build scenario would decline in LOS. The number should be six.

10 The last line in the first column of page 52 refers to 519 vehicles; the number should be 499.

11 The small table in the second column of page 52 seems to be mislabeled: the column headings should be reversed.

PARKING

12 Floor plans of each parking level should be supplied in the FEIR.

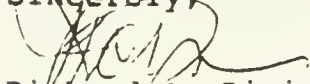
MITIGATION

13 The full package of transportation mitigation measures will be developed in discussions between the Developer, the BRA and the BTB. A few of the measures proposed in the DEIR, however, need more detail. It is not clear how a 300-seat general dining room will accommodate 1000 employees, even over an extended lunch hour. The scheduling and hours of operation of the Andrew Square shuttle should be provided.

14

Thank you for the opportunity to review this DEIR. I will forward these comments also to the BRA for use in their design review, and will work with the developer to develop a package of mitigations which can address the impacts of this project on the transportation system of the City.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. Dimino', written over the word 'Sincerely,'.

Richard A. Dimino
Commissioner

2498T

LETTER 5: CITY OF BOSTON TRANSPORTATION DEPARTMENT

Comment #1:

Names used for the various intersections under analysis should be consistent throughout.

Response:

The names used for intersections vary because many facilities have several common names. The SE Expressway is also known as I-93, and both names were used in the report. Common abbreviations such as SB for southbound, NB for northbound and SE for southeast are also used interchangeably. The report also took care to refer to the two different SE Expressway interchanges as the Southampton Street ramps and the Massachusetts Avenue, Melnea Cass Boulevard, Southampton Street and SE Expressway ramps. Further confusion exists because the Expressway ramp adjacent to the site is also used as a two-way service road to the Sears Distribution Center. The name used in many instances was chosen because of the context in which it was being used.

While the multiplicity of names was used interchangeably, all of the names reflect common usage, as was reflected in the public agency responses. It is noted that an additional common name for I-93, the Central Artery, is used in some agency comments.

Comment #2:

As shown in Figures 7, 10 and 14, what is in fact access from Melnea Cass/Mass Avenue/Southampton Street intersection to the SE Expressway north or southbound is mislabeled as being for northbound only.

Response:

The comment is correct. The ramp to the SE Expressway serves both north and southbound traffic and in fact, is shown in Table 17. This ramp is the primary route for southbound SE Expressway traffic to the site.

Comment #3:

Correction to Tables 2, 3, 10 and 11 relative to reference to a "Southampton EB LT".

Response:

The comment is correct. The movement under discussion is the westbound left turn.

Comment #4:

Tables 2, 3 and 10 have figures representing seconds of delay in the columns labelled "Average Veh.".

Response:

A type setting error makes it appear in Table 2, 3 and 10 that the first and third columns are labeled "Average Veh." The heading is actually "Average Veh.Delay (Sec.)." The spaces between "Veh." and "Delay" in the table generated the impression that these were separate headings.

Comment #5:

Discuss how peak hour recordings for different analysis intersections were taken into account in the project impact analysis.

Response:

See response to BRA letter, Comment #7.

Comment #6:

Elaborate on background growth assumptions as they relate to the Newmarket area.

Response:

Two specific project in the study area, the Boston City Hospital Renovations and the Suffolk County House of Correction would generate little or no new traffic. The Boston City Hospital project would demolish 900,000 sf of existing building and replace it with only 400,000 sf of new construction and will result in a reduction in traffic (BCH Environmental Notification Form, 9/4/85). The Suffolk County jail would result in only 100 new vehicle trips to the site per day and 60 new parking spaces. (Suffolk County House of Correction Environmental Notification Form, 12/30/). The shifts at the jail generally report and end before the peak hours on the adjacent streets and would not affect the area traffic. Taken together it is assumed that the impact of these projects will be negligible.

Based on discussions with EDIC, with the BRA and with community groups, no significant projects were identified for the Newmarket area. However, a background traffic growth of one percent per year was assumed, not related to specific developments. Since the construction year of the Project is 1991, it is unlikely that other as yet unidentified projects will precede this project. Also, the compounding effects of growth over such a short forecast period will be minimal. If traffic grew instead by two percent per year, the additional increase would be only 3 percent. Variations of this extent would not change the capacity analysis.

Comment #7:

Assess the effect of peak-period spreading from the SE Expressway and reassign trips to Morrissey Boulevard and other local streets as necessary.

Response:

See response to BRA letter, Comment #6.

Comment #8:

Explain why, in Table 11's comparison, the left turn from the SE Expressway NB off-ramp to Southampton Street is projected to function better (LOS E) with the project than without it.

Response:

See response to BRA letter, Comment #8.

Comment #9:

The second paragraph on page 52 states that only five (5) peak hour movements under the Build scenario would decline in LOS. The number should be six (6).

Response:

Only five (5) movements experience a Level of Service decline, but one movement experiences a decline in both peak hours, accounting for the "sixth" movement.

Comment #10:

The last line in the first column on page 52 refers to 519 vehicles; the number should be 499.

Response:

The text on page 52 incorrectly transcribed the No-Build volume, not the shortfall, as identified in Table 10. The No-Build shortfall is indeed 499.

Comment #11:

Table column headings on page 52 should be reversed.

Response:

The table headings on page 52 were reversed. No-Build and Build in this case refer to the Boston Science Center. The intent is to show that the mitigation which is necessary at this intersection under the No-Build conditions will be sufficient for the project's Build conditions.

Comment #12:

Floor plans of each parking level should be supplied.

Response:

See Figures 7,8 and 9.

Comment #13:

Explain how a 300-seat general dining room will accommodate 1000 employees.

Response:

A generally accepted standard in food service is a 15-20 minute eating time for a cafeteria lunch. Seating is considered full if 82% to 88% of the seats are occupied. Given a two-hour period when lunch will occur, turnover per seat can be expected to range from 5-7 lunches per seat. In practice, a lunchroom will serve at most 90% of the employees, since some employees will work through lunch or eat at their work station. Thus, a 300-seat cafeteria can accommodate from 1,667 to 2,333 employees. Since the number of employees in the building will be approximately 1,160, the cafeteria seating should be adequate.

In the spring 1989 issue of *Laboratory Planning and Design*, a 370,000 gross sq.ft. research center for Nabisco is shown with a 185-seat cafeteria. At this ratio, the required size for the 580,000 gross sq.ft. Boston Science Center would be 290 versus the 300 seats actually planned.

Comment #14:

Provide more information on the scheduling and hours of operation of the Andrew Square shuttle.

Response:

See response to BRA letter, Comment #5.



MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

LETTER #6 Telephone:
(617) 242-6000

Board of Directors
John P. DeVillars, Chairman
William N. Anderson
John J. Carroll
Robert J. Ciolek
Aime M. Downey
Anthony V. Fletcher
Charles Lyons
Daniel G. Mygatt
Margaret A. Riley
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Nathan Z. Souweine

Executive Director
F. Levy

February 10, 1989

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OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

John P. DeVillars, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

Attention: MEPA Unit

RE: EOE No. 711R-Boston Science Center, Boston

Dear Secretary DeVillars:

Concerning the above-referenced Draft Environmental Impact Report (DEIR), we submit the following comments:

1. The proponent has failed to include measures to mitigate the impacts of this additional wastewater flow on the sanitary sewer system. Even if there were sufficient capacity in the receiving sewer for this particular project, the cumulative flow from this and other proposed projects may be great. Also, any additional flow to Deer Island will increase the severity of the capacity shortfall problem already existing. As noted by the proponent, the Secondary Treatment Facility at Deer Island will not be complete until 1999. In the Final EIR the proponent should include a section on proposed mitigation measures (i.e., water conservation methods, I/I removal, etc.)
2. If the proponent intends to discharge to the sewer system anything other than sanitary sewage, a Sewer Use Discharge Permit must be obtained from the MWRA.

We appreciate the opportunity to comment. Should you have any question, please do not hesitate to call me at 241-6238.

Yours very truly,

Katina N. Belezos, Project Engineer
Technical Support Unit
Wastewater Engineering

KNB/mb:710

LETTER 6: MASSACHUSETTS WATER RESOURCE AUTHORITY

Comment #1:

Include a section on measures to mitigate additional wastewater flow on the sanitary sewer system (i.e., water conservation methods, I/I removal, etc.)

Response:

See response to EOEa Letter, Comment #7.

Comment #2:

A Sewer Use Discharge Permit must be obtained from the MWRA if the Proponent intends to discharge to the sewer system anything other than sanitary sewage.

Response:

As was acknowledged in the Draft PIR/EIR, a Sewer Use Discharge Permit is expected to be required and obtained.



Metropolitan Area Planning Council

60 Temple Place, Boston, Massachusetts, 02111 • 617-451-2770

serving 101 cities and towns in Metropolitan Boston

February 7, 1989

The Honorable John DeVillars, Secretary
Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

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OFFICE OF THE SECRETARY
DEPARTMENT OF ENVIRONMENTAL AFFAIRS

LETTER #7

RE: Proposed Boston Science Center in South Boston
(EOEA # 7111)

Dear Secretary DeVillars:

In accordance with the provisions of Chapter 30, Section 62 of the Massachusetts General Laws, the Council has reviewed the above Final Environmental Impact Report.

The Boston Science Center site is situated in an area of South Boston which consists of manufacturing, industrial and are housing uses. The site contains a vacant, dilapidated one story industrial building and an asphalt paved area, which are presently under demolition. The proposed project consists of two buildings, each eight stories tall, which will be used for biomedical research. The project Proponent has requested a variance to increase the F.A.R. from the as-of-right 2.0, to 3.0. The request is currently under review.

The Certificate of the Secretary of Environmental Affairs, dated August 25th, 1988, required preparation of an Environmental Impact Report (EIR) under Sections 11.04 and 11.06 of the MEPA regulations. MEPA has combined its review with that of the Boston Redevelopment Authority (BRA) to produce one compliance document for the Proponent which requires information on traffic, water quality, wind and shadow impacts, and detailed information concerning urban design and geotechnical studies conducted.

After careful review of the Draft EIR, the Council has identified a couple of areas which require additional information or clarification.

Traffic

The proponent anticipates a 28% transit share for the site. This mode split appears to be based upon minimal effort on behalf of the proponent to encourage a shift in travel habits. Given that the 50%-60% drive alone share of trips is similar to unmitigated mode splits for other Boston/Cambridge projects, the proponent is not adequately promoting commute alternatives.

1

The proponent should consider aggressive traffic management strategies in addition to the proposed shuttle bus between the site and Andrew Station. Some suggestions may include:

1. Preferential parking for car- and van-pools (An increase in the proposed vehicle occupancy from 1.17 to 1.27 would reduce p.m. peak hour traffic by 7.8%).
2. Employer sponsored transit passes (The EIR identifies a per vehicle parking cost of \$9.00 per day. This is quite affordable for parking in Boston and may actually encourage auto use).
3. Restricting the use of parking areas by non-high-occupancy-vehicles during portions of the morning and evening peak hours.
4. Instituting a guaranteed-ride-home for use in emergency situations by employees choosing to utilize transit, car or van-pools.

Developing a proactive transportation management plan for The Boston Science Center may be able to reduce the drive alone mode share to 30% or 40% of all trips.

Wind

2

Option A appears to be presented as the project of choice, pending approval of the F.A.R. variance. Given this, better mitigation methods should be considered which address the increased wind velocity resulting from the greater massing of the Option A development. It is unclear from the EIR what kinds of wind speeds pedestrians will be expected to withstand on a consistent basis.

Thank you for the opportunity to review and comment on this Final Environmental Impact Report.

Sincerely,



David C. Soule
Executive Director

cc: Commissioner Richard Dimino, Boston
Paul Reavis, BRA
Congress Group Ventures, Inc.
Katy Hax, MAPC Staff
Carolyn DiMambro, EOTC

DF/DCS/ent
(Trans.-mepa)

LETTER 7: METROPOLITAN AREA PLANNING COUNCIL

Comment #1:

Consider aggressive traffic management strategies.

Response:

The existing modal split in the Newmarket Square area is 23%, the average auto occupancy is 1.14 and the average parking cost is \$.90 per day (reflecting primarily the large amount of free parking). This location is not as well-served by public transportation nor are parking costs as high as locations in downtown Boston. Through parking fees, it is felt that this can be increased to 28% transit and 1.17 person per auto. The Proponent is willing to implement a Transportation Coordinator, shuttle service to the Andrew Square MBTA Station, and on-site transit pass sales that will increase this percentage further to 32%. But it is not realistic to assume that 60% to 70% of the employees would use public transit and it would be a disservice to design the project with this expectation.

The Proponent is also willing to implement measures to increase carpooling, including participating in the Caravan program and designation of car pool and van pool parking spaces. Furthermore, the Proponent will encourage its tenants to consider implementing flex-time work hours and employer-subsidized transit passes.

Comment #2:

Better mitigation methods should be considered which address the increased wind velocity resulting from the greater massing of the Option A development

Response:

The wind velocities created by the mass of Option A have been reduced to a certain extent by the lower building heights of the new design of the currently proposed Boston Science Center. The wind climate anticipated around the base of the new design of the proposed structure is not expected to be severe, and is expected to be suitable for intended activities. In the areas where winds may be slightly above the level desired, mitigative action in the form of landscaping or site detailing should adequately address any wind comfort problems. These measures will be pursued in further detail with modelling after the approval of schematic design.

APPENDIX A: BRA DOCUMENTS

PROJECT SITE METES AND BOUNDS

A CERTAIN PARCEL OF LAND IN THE COMMONWEALTH OF MASSACHUSETTS, COUNTY OF SUFFOLK, CITY OF BOSTON, SOUTH BOSTON DISTRICT, SITUATED ON THE SOUTHERLY SIDE OF SOUTHAMPTON STREET AS SHOWN ON A PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY PLAN OF LAND IN BOSTON, MA., SOUTH BOSTON DISTRICT, SUFFOLK COUNTY, SCALE 1:240, 24 DECEMBER 1987." PREPARED BY GUNTHER ENGINEERING, INC. AND MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF A RAILROAD RIGHT-OF-WAY NOW OR FORMERLY OF THE MASSACHUSETTS BAY TRANSPORTATION AUTHORITY LOCATED ALONG THE MONUMENTED RAILROAD BASELINE AT STATION 100+78.72 FEET LEFT 41.25 FEET SAID POINT BEING THE NORTHWESTERLY CORNER OF SAID PARCEL; THENCE RUNNING

S 58-00-00 E 149.84 TO A POINT OF CURVATURE; THENCE RUNNING

SOUTHEASTERLY 53.61 FEET BY A CURVE TO THE LEFT HAVING A RADIUS OF 178.00 FEET TO A LEAD PLUG WITH ESCUTCHEON PIN IN A MASSACHUSETTS HIGHWAY BOUND AT A POINT OF TANGENCY, SAID POINT LOCATED AT AUXILIARY BASELINE "G" STATION 2+66.02 FEET RIGHT 88.00 FEET; THENCE RUNNING

S 75-15-21 E 270.89 FEET TO A POINT OF CURVATURE; THENCE RUNNING

SOUTHEASTERLY 122.08 FEET BY A CURVE TO THE RIGHT HAVING A RADIUS OF 152.00 FEET TO A POINT OF TANGENCY; THENCE RUNNING

S 29-14-11 E 111.99 FEET TO A POINT. SAID LAST FIVE COURSES BEING BY 1957 STATE HIGHWAY LAYOUT NUMBER 4590; THENCE TURNING AND RUNNING

S 14-44-39 W 219.96 FEET TO A POINT; THENCE TURNING AND RUNNING

N 75-15-21 W 725.42 FEET TO A POINT ALONG THE EASTERLY SIDE OF THE PREVIOUSLY MENTIONED RAILROAD RIGHT-OF-WAY NOW OR FORMERLY OF THE MASSACHUSETTS BAY TRANSPORTATION AUTHORITY LOCATED ALONG THE MONUMENTED RAILROAD BASELINE AT STATION 104+84.52 FEET LEFT 41.25 FEET; THENCE TURNING AND RUNNING

N 24-53-26 E 405.80 FEET TO THE POINT OF BEGINNING

CONTAINING 22,050 SQUARE METERS, MORE OR LESS, OR 237,344 SQUARE FEET, MORE OR LESS, OR 5.449 ACRES MORE OR LESS.

BOSTON SCIENCE CENTER

Project
Notification
Form

SUBMITTED TO
The Boston Redevelopment Authority

SUBMITTED BY

Southmed Limited Partnership
c/o Congress Group Ventures, Inc.
One Memorial Drive
Cambridge, MA 02142

PREPARED BY

Congress Group Ventures, Inc.
One Memorial Drive
Cambridge, MA 02142

Boston Redevelopment Authority

Project Notification Form

Summary

A. Project Identification

1. Project Name:
Boston Science Center
2. Address/Location:
301 Southamptn Street, Boston
3. Property Owner:
Southmed Limited Partnership
4. Developer:
Southmed Limited Partnership
5. Developer's Representative:
Vincent A. Chiozzi, Congress Group Ventures, Inc.
6. Architect:
Cannon/Yan
7. Architect's Representative:
Juanito Yan
8. Consulting Engineer:
Vanasse/Hangen/Brustlin
9. Consulting Engineer's Representative:
Robert Vanasse
10. Mechanical Engineer:
Cosentini Associates
11. Mechanical Engineer's Representative:
Dick Leeber
12. Legal Counsel:
Goodwin, Procter & Hoar
13. Estimated Commencement and Completion Dates:
Construction is expected to begin in January, 1989 and to be completed in December, 1990.
14. Approximate Cost:
\$80,000,000

15. Status of Project Design:
Ten Percent Complete

16. Applicability of Article 31, Boston Zoning Code:
Because the Project is not located in the
Downtown/Northern Avenue Corridor Area, Article 31 of
the Boston Zoning Code does not apply to the Project.
However, the Project Proponent anticipates that the BRA
will conduct Project design and development review in
accordance with the provisions of Article 31.

B. Narrative Project Description (Describe the site and the
design and development programs).

Southmed Limited Partnership proposes to develop the Boston Science Center on the site of the former Colonial meat packing and processing plant, 301 Southamptton Street, Boston. The Project site currently contains a vacant, dilapidated one (1) story industrial building of approximately 78,618 square feet and an adjacent asphalt paved area of approximately 150,000 square feet. This is adjacent to the Southamptton Street overpass and the Southeast Expressway in an area characterized by low-rise manufacturing, industrial and warehouse uses.

The existing building will be demolished and the Boston Science Center will be constructed on the site. The Boston Science Center will consist of two buildings, each eight stories tall, which will be used for biomedical research. The buildings in the aggregate will contain approximately 610,150 square feet of biomedical laboratory and related office space, approximately 84,200 square feet of mechanical equipment space and two floors below the building of structured parking for 530 automobiles. One level of parking will be below ground level and the other will be at grade. The Boston Science Center will also include driveways for internal site circulation, exterior lighting, landscaping and other site improvements. Access to the site will be through a relocated curb cut near the intersection of Southamptton Street and the Southeast Expressway service road and through an existing curb cut which serves the Project site through an easement. In addition, the Andrew Square stop on the Red Line is located approximately 1,000 feet from the Project site.

C. List Federal or State agencies from which permits or other actions will be sought:

<u>Agency Name</u>	<u>Permit</u>	<u>Dated Filed/ File No.</u>
Massachusetts Executive Office of Environmental Affairs	MEPA Approval	ENF filed 5/2/88, file #7111; Project size increased and revised ENF filed under same file number 6/15/88.
Department of Environmental Quality Engineering - Division of Water Pollution Control	Sewer Connection Permit	
Department of Environmental Quality Engineering - Division of Air Quality Control	Approval of Boiler Plans	
Massachusetts Water Resources Authority	Sewer Discharge Permit	
Massachusetts Department of Public Works	Curb Cut Permit (relocation of existing curb cut)	

Note: Each permit listed above will be filed unless further analysis shows that such permit is not required.

D. List any zoning relief required for this project (including any zoning variance, exception, conditional use permit, interim planning permit, zoning map or text change or Development Impact Agreement):

1. A Conditional Use Permit for a scientific research and teaching laboratory not conducted for profit and accessory to a college or university granting degrees by authority of the Commonwealth of Massachusetts and located in a General Industrial I-2 District is expected to be required for the Boston Science Center pursuant to Article 8 (use items 24 and 16A) and Article 6 of the Boston Zoning Code.

2. A variance under Article 7 of the Boston Zoning Code is expected to be required to change the maximum Floor Area Ratio applicable to the Project site from 2.0 to 3.0.
 3. A variance under Article 7 is also expected to be required to change the off-street parking requirements set forth in Article 23 from those which apply to a lot with a maximum Floor Area Ratio of 2.0 to those which apply to a lot with a maximum Floor Area Ratio of 3.0.
 4. Boston Science Center will require Development Impact Project approval as specified under Articles 26 and 26B of the Boston Zoning Code.
- E. List any governmental agencies or programs from which financial assistance for this Project is being sought:
- None.

Project Description

- A. Attach map showing location of project; survey if available; site plan and architectural rendering if available.

Please see the following attachments:

Attachment 1 - Locus Plan
 Attachment 2 - Survey Plan prepared by Gunther Engineering
 Attachment 3 - Site Plan prepared by Cannon/Yan
 Attachment 4 - Floor Plans and Renderings prepared by Cannon/Yan

- B. Dimensions - See Attachments

- C. Uses - List the Current and Proposed Uses and the Square Footage for each use:

<u>Existing Buildings</u>	<u>Gross Square Footage (estimated)</u>	<u>Net Zoning</u>
Vacant - Former meat processing and packing plant	78,618	78,618

<u>Other Existing Uses</u>	<u>Gross Square Footage (estimated)</u>	<u>Net Zoning</u>
Parking (paved surface area)	150,000	N/A

<u>Proposed Building Uses</u>	<u>Gross Square Footage (estimated)</u>	<u>Net Zoning</u>
Biomedical research	610,150	610,150
Support Mechanical equipment	84,200	

<u>Other Proposed Uses</u>	<u>Gross Square Footage (estimated)</u>	<u>Net Zoning</u>
Parking (one level below grade, one level at grade for a total of approximately 530 cars)	287,270	101,580

(Source: Cannon/Yan)

TOTAL PROJECT FAR SQUARE FOOTAGE -	711,730
------------------------------------	---------

Assessment of Development Review Components

(Note anticipated direct and indirect environmental impacts, if any, for each review component. If significant adverse impact is considered likely to result, please explain. Positive impact may also be considered).

A. Transportation Components

1. Traffic Management

The Project will be located near the intersection of Southampton Street and the Southeast Expressway. The Project is expected to generate approximately 3506 vehicle trips per day, and increase the average daily traffic on Southampton Street from approximately 15,000 vehicles to approximately 18,506 vehicles. (Source: Vanasse/Hangen/Brustlin) The Project Proponent intends to implement various traffic mitigation measures, e.g. shuttle buses to and from the Andrew Square stop on the Red Line and to and from nearby institutions which are expected to be users of the Project. The Proponent will work with its Consulting Engineer to study the traffic management issues and mitigate the Project's traffic impact.

2. Parking Management

The Project will provide parking for approximately 530 cars in a structured lot underneath the Project buildings, which the Project Proponent believes

will be sufficient to satisfy the Project's on-site parking requirements.

3. Construction Management

The Project Proponent will implement measures to mitigate the effects of construction vehicle traffic on the surrounding area, such as requiring delivery routes which avoid residential neighborhoods. It should be noted that the surrounding area is industrial in nature, and that Project construction is not expected to have a material impact on residential areas.

B. Environmental Protection Component

1. Wind

The Project Proponent does not expect that the Project will have a significant impact on wind conditions in the Southampton Street area. The Project is not located in an area which currently sees significant pedestrian activity. However, the Project Proponent intends to conduct wind studies to quantify the potential impact of the Project on area wind conditions.

2. Shadow

The Project Proponent does not expect that Project shadows will be a significant concern to any neighboring properties. However, the Project Proponent intends to conduct shadow studies to quantify the impact on neighboring properties of Project shadows.

3. Daylight

The Project Proponent does not expect that the Project will have any materially adverse impact on the view, light or air of any neighboring properties.

4. Solar Glare

The materials used to construct the Project exterior will be selected to minimize the extent of solar glare. It is expected that the Project will be encased with a masonry skin with cast stone trim, with tinted windows.

5. Air Quality

Project construction could generate temporary increases in air contamination due to construction-related dust and exhaust emissions from construction vehicles.

Construction-related dust will be controlled through normal construction dust mitigation practices, such as wetting. After construction is completed, while Project-related traffic will result in long-term increases in hydrocarbon exhaust emissions these emissions will not significantly increase ambient hydrocarbon exhaust levels due to the volume of existing traffic on Southampton Street and the Southeast Expressway. (Source: Vanasse/Hangen/Brustlin).

In addition, each building will be heated by two gas-fired, low-pressure fire tube hot water boilers which will each generate 700 boiler horsepower of energy output. The energy consumption for the Project will be approximately 105,000 BTU/SF/YEAR. (Source: Cosentini Associates) The Project exceeds a threshold established pursuant to the regulations promulgated at 310 CMR 7.02 under the Massachusetts Clean Air Act, Mass General Laws Chapter 111, Section 142A-142E, and the Project Proponent must receive approval of the Project boiler plans and specifications, proposed standard operating procedure and proposed maintenance procedure from the Division of Air Quality Control of the Department of Environmental Quality Engineering.

6. Water Quality

The Project site is currently totally paved. The Project is not expected to result in any significant adverse change in existing drainage patterns or any increases in stormwater runoff and is expected to improve site drainage through unified collection of storm water in a closed system.

7. Flood Hazard Zones/Wetlands

The Project is not located in either a flood hazard zone or a wetland area.

8. Groundwater

Based on data from three observation wells installed for the Project Proponent, groundwater at the Project site ranges from 7.2 to 8.8 feet below ground surface, indicating a groundwater elevation range from 6.2 to 7.8, Boston Vertical Datum. Tentative plans would place the bottom of the Project foundation approximately 3 feet below the groundwater level. (Source: Geotechnical Report for Preliminary Design prepared by Goldberg Zoino & Associates, Inc.) Accordingly, appropriate groundwater control will be required during construction. The Project Proponent has delivered to the BRA the Geotechnical Report mentioned above.

9. Geotechnical Impact, including subsoil conditions

The Project site comprises 10 to 15 feet of loose granular fill with cinders over a soft organic silt and/or peat stratum extending from 21 to 38 feet below present site grade. The underlying stratum consists of medium-stiff to hard clay completely interbedded with dense sand layer and lenses. This layered sand and clay is an adequate bearing stratum. (Source: Geotechnical Report for Preliminary Design prepared by Goldberg Zoino & Associates, Inc.)

The existing building is founded on 824 16 inch diameter Simplex piles with an average length of 35 feet. The Dorchester Drain, a concrete horseshoe-shaped drain with inside dimensions of 10.33 feet by 11.83 feet and 16 inch thick walls, traverses the west side of the site in a north-south direction.

The Project Proponent is investigating whether to utilize a friction pile scheme or a shallow structural mat foundation with over-excavation of all organics. Construction considerations regarding the existing Simplex piles, groundwater control and lateral support of the excavation will depend on the foundation alternative adopted.

10. Solid and Hazardous Waste

The demolition of the existing building on the Project site and the excavation for the Project foundation and garage will generate large amounts of rubble, dirt and other fill estimated at approximately 35,000 cubic yards. All such rubble, dirt and fill will be disposed of by appropriate methods in accordance with all federal, state and local regulations.

The Project will be a biomedical research facility and will generate the types of solid wastes consistent with similar scientific and research facilities. However, Project tenants are not yet known and accordingly it is unknown what specific types of solid waste the Project will generate, or whether the Project will generate hazardous waste. The Project Proponent will require as a precondition to leasing space in the Project that all Project tenants comply with all federal, state and local laws and regulations with respect to the generation, storage and disposal of all solid and any hazardous materials and wastes which such tenants generate in their use of the Project.

11. Noise

The Project will generate normal construction related noise during the construction phase. The operating

Project will not result in the generation of noise and is not expected to have any material noise impact on the surrounding neighborhood. It is to be noted that the Project is located in an area currently dominated by streets, highways and industrial, manufacturing and warehousing facilities.

12. Construction Impact, proposed safety features and construction methodology

As noted above, the Project Proponent is weighing alternative foundation schemes. Once a foundation scheme is selected the construction considerations for such scheme and Project safety features will be explored in the course of Project design.

13. Rodent Control

The Project Proponent will implement an appropriate rodent control program during construction of the Project.

C. Urban Design Component

1. Architectural Compatibility

As noted above, the area surrounding the Project site is characterized by low-rise manufacturing, industrial and warehouse buildings which are strictly utilitarian in design, bear no functional relationship to one another and present no coherent streetscape. The Project is the first large-scale new commercial construction in this area, and the Project Proponent believes it is more appropriate to view the Project as one which will complement future projects in the area. Project architecture will meet the design imperatives of a biomedical research laboratory, with high ceilings, large open floors and high-volume mechanical systems, in a building which is designed to be self-sufficient, with an on-site cafeteria and auditorium, a central courtyard and landscaping and site amenities. The Proponent intends currently to clad the Project with a masonry skin and cast stone trim. Since the Project will be the tallest building in the immediate area and will be visible from all directions the Project will not project a "back" side in any direction.

2. Quality of Pedestrian Environment

As noted above, the area surrounding the Project does not currently enjoy significant pedestrian activity and, in fact, presents a vacant and uninviting pedestrian

environment. The Project, by itself, cannot overcome the shortcomings of the immediate pedestrian environment. However, the Project should increase pedestrian activity, from the Andrew Square station and from nearby educational and medical institutions, and will provide a more inviting streetscape than currently exists in the area through landscaping and architectural detailing. An at-grade courtyard between the Project buildings with landscaping, a fountain and benches will provide a pedestrian destination and an area for relief from the vacant pedestrian environment off-site.

3. Consistency with Established Design Guidelines

To the best knowledge of the Project Proponent the City of Boston has not issued design guidelines which are applicable to the Project.

D. Historic Resources Component

1. Impact on Objects, Structures, Buildings, Sites or Districts of Historic, Architectural, Archaeological or Cultural Distinction

The Project site does not contain any objects, structures, buildings or sites of historic, architectural,, archaeological or cultural distinction, and is not located in a district of historic, architectural, archaeological or cultural distinction, nor are there any such objects, structures, buildings or sites located adjacent to or in the vicinity of the Project.

2. Landmark Status of Property (Boston Landmark, State Register of Historic Places, National Register of Historic Places)

The existing buildings on the Project site have no landmark status with either the Boston Landmark Commission, the State Register of Historic Places or the National Register of Historic Places.

F. Infrastructure Systems Component

1. Anticipated Sewer Generation, if known

The Project is expected to generate approximately 58,167 gallons per day of sanitary sewage. There are no regulatory criteria for generation of sanitary sewage by laboratory uses. Using criteria based on the consulting engineer's experience and assuming 310,150 square feet of laboratory space, then $(310,150 \times 115 \text{ gpd})/1,000 =$

35,667 gpd. Using the Title V Standard for office use of 75 gpd and assuming 300,000 square feet of office space, then $(300,000 \times 75 \text{ gpd}) / 1,000 = 22,500 \text{ gpd}$, for a total of 58,167 gpd. Sanitary sewage will be conveyed to the MWRA treatment system. (Source: Cosentini Associates)

2. Anticipated Water Consumption, if known

The Project is expected to consume, under peak load conditions, approximately 199,000 gallons per day of water. Water consumption will include approximately 64,000 gallons per day of sanitary sewage and general water use (assuming sanitary sewage of 58,167 gpd amounts to 90% of total daily water use) and approximately 135,000 gallons per day during peak air conditioning load (assuming consumption of 45 gpd/ton of refrigeration and 3,000 tons of Project refrigeration). (Source: Cosentini Associates)

3. Anticipated Electricity Consumption, if known

The Project's anticipated consumption of electricity will be quantified during design development.

4. Anticipated Energy Requirements, if known

The Project's anticipated energy requirements will be quantified during design development.

Coordination with Other Governmental Agencies

A. Boston Civic Design Commission Review

As a "large-scale development project" the Project comes under the jurisdiction of the Boston Civic Design Commission.

B. Boston Landmarks Commission Review

As noted above, the Project site does not contain any structure, building or object which will subject to Boston Landmarks Commission Review.

C. Massachusetts Environmental Policy Act Requirements

The Project is categorically included for preparation of an Environmental Impact Report under the Massachusetts Environmental Policy Act. An Environmental Notification Form was submitted to the Executive Office of Environmental Affairs on June 15, 1988, under File #7111. The Project Proponent requests that the review process and schedule of

both the ENF and this PNF be synchronized to enable it to present environmental analyses that address the concerns of both the MEPA and the BRA staff comprehensively in a single set of documents.

D. Architectural Access Board Requirements

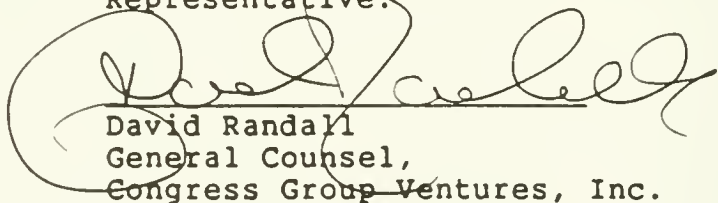
As a commercial project exceeding two stories in height and employing more than 40 people, this project is subject to the jurisdiction of the Architectural Access Board. The project will be designed to comply with the requirements of the AAB.

Proponent's Certification

This form has been circulated to all agencies and persons as required by Boston Zoning Code, Article 31, Section 31-5 (1).

Signature of Proponent's
Representative:

6/27/88
Date


David Randall
General Counsel,
Congress Group Ventures, Inc.

Proponent (Print or Type)

Address: Southmed Limited Partnership
c/o Congress Group Ventures, Inc.
One Memorial Drive
Cambridge, MA 02142

Telephone: 617-494-1111

0330K

Attachment 1

Locus Plan

the proposed Project on March 24, 1989 and April 4, 1989, respectively. The MWRA reinforced the need for conservation, as outlined above, and referred the Proponent to the BWSC for comments on other mitigation. Subsequently, the BWSC advised the Proponent that the project had been reviewed and that comment was deemed unnecessary at this time, though continued review of proposed connections in greater detail will be appropriate at a later date during the building permitting process. The Proponent will work with the BWSC at that time to resolve any concerns.



Vanasse Hangen Brustlin, Inc.
Consulting Engineers & Planners
60 Birmingham Parkway, Boston, MA 02113

Scale: 1"=2085'

Site Location Map

⊕ Fig. 1

APPENDIX B: MEPA DOCUMENTS

ENVIRONMENTAL NOTIFICATION FORM

I. SUMMARY

A. Project Identification

1. Project Name Boston Science Center
Address/Location 301 Southamptton Street
Boston, MA
City/Town _____
2. Project Proponent Southmed Limited Partnership
Address c/o Congress Group Ventures, Inc. *
3. Est. Commencement January, 1989 . Est. Completion December, 1990 .
Approx. Cost \$ 80,000,000 . Status of Project Design 10 % Complete.
4. Amount (if any) of bordering vegetated wetlands, salt marsh, or tidelands to be dredged, filled, removed, or altered (other than by receipt of runoff) as a result of the project.
0 acres 0 square feet.
5. This project is categorically included and therefore requires preparation of an EIR.
Yes X No ?
*One Memorial Drive, -Cambridge, MA 02142

B. Narrative Project Description

Describe project and site.

The Project site currently contains a vacant, dilapidated one (1) story industrial building of approximately 78,618 square feet and an asphalt paved area of approximately 150,000 square feet. The site is located adjacent to the Southamptton Street overpass and the Southeast Expressway in an area characterized by low-rise manufacturing, industrial and warehouse use.

The Project, to be known as the Boston Science Center, will consist of two eight (8) story buildings for biomedical research containing a total of approximately 610,150 square feet of laboratory and related office space, approximately 84,200 square feet of mechanical equipment space and two floors of structured, partially below-grade parking for approximately 530 automobiles. The Project will also include driveways, exterior lighting, landscaping and other site improvements.

Copies of the complete ENF may be obtained from (proponent or agent):

Name: David Randall Firm/Agency: Congress Group Ventures, Inc.
Address: One Memorial Drive, Cambridge, MA Phone No. 494-1111
02142

C. List the State or Federal agencies from which permits or other actions ~~to be sought~~ will be sought:

Agency Name	Permit	Date filed; file no.
Mass. DPW	Curb Cut Permit (Relocation of existing curb cut)	
MWRA	Sewer Discharge Permit	
DEQE-DAQC	Approval of Boiler Plans	
DEQE-DWPC	Sewer Connection Permit	

D. List any government agencies or programs from which the proponent will seek financial assistance for this project:

Agency Name	Funding Amount
NONE	

E. Areas of potential impact (complete Sections II and III first, before completing this section).

1. Check all areas in which, in the proponent's judgment, an impact of this project may occur. Positive impacts, as well as adverse impacts, may be indicated.

	Construction Impacts	Long Term Impacts
Inland Wetlands		
Coastal Wetlands/Beaches		
Tidelands		
Traffic	X	X
Open Space/Recreation		
Historical/Archaeological		
Fisheries/Wildlife		
Vegetation/Trees		X
Agricultural Lands		
Water Pollution		
Water Supply/Use	X (Demolition)	
Solid Waste		
Hazardous Materials		
Air Pollution		
Noise	X	
Wind/Shadow		
Aesthetics		X
Growth Impacts		
Community/Housing and the Built Environment		X
Other (Specify)		

2. List the alternatives which have been considered.

No build alternative. Reuse of the existing abandoned structure is not feasible.

F. Has this project been filed with EOE A before? No _____ Yes X EOE A No. 7111

G. WETLANDS AND WATERWAYS

1. Will an Order of Conditions under the Wetlands Protection Act (c.131s.40) or a License under the Waterways Act (c.91) be required?
Yes _____ No X
2. Has a local Order of Conditions been:
a. issued? Date of issuance 1976 ; DEQE File No. 6-67 *.
b. appealed? Yes _____ ; No _____ .
3. Will a variance from the Wetlands or Waterways Regulations be required? Yes _____ ; No _____ .

*There is a 1976 Order of Conditions which was apparently issued retroactively for culverting done in prior years.

II. PROJECT DESCRIPTION

- A. Map; site plan. Include an original 8½ x 11 inch or larger section of the most recent U.S.G.S. 7.5 minute series scale topographic map with the project area location and boundaries clearly shown. If available, attach a site plan of the proposed project.

USGS map attached as Exhibit 1.

- B. State total area of project: 5.44 acres.

Estimate the number of acres (to the nearest 1/10 acre) directly affected that are currently:

- | | | | |
|----------------------------------------|-------------------|----------------------------------------------|----------------|
| 1. Developed | <u>5.44</u> acres | 6. Tidelands | <u>0</u> acres |
| 2. Open Space/
Woodlands/Recreation | <u>0</u> acres | 7. Productive Resources
Agriculture | <u>0</u> acres |
| 3. Wetlands | <u>0</u> acres | Forestry | <u>0</u> acres |
| 4. Floodplain | <u>0</u> acres | 8. Other | <u>0</u> acres |
| 5. Coastal Area | <u>0</u> acres | | |

- C. Provide the following dimensions, if applicable:

	* Existing N/A	Increase N/A	Total N/A
Length in miles	<u>0</u>	<u>0</u>	<u>0</u>
Number of Housing Units	<u>1</u>	<u>8</u>	<u>8</u>
Number of Stories	<u>78,618</u>	<u>694,350</u>	<u>694,350</u>
Gross Floor Area in square feet	<u>450</u>	<u>530</u>	<u>530</u>
Number of parking spaces			
Total of Daily vehicle trips to and from site (Total Trip Ends)	<u>±300**</u>	<u>3506</u>	<u>3506</u>
Estimated Average Daily Traffic on road(s) serving site			
1. <u>Southampton Street</u>	<u>15,000</u>	<u>18,506</u>	<u>18,506</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____

*existing building to be demolished.

**prior to discontinuance of former site use.

- D. TRAFFIC PLAN. If the proposed project will require any permit for access to local roads or state highways, attach a sketch showing the location and layout of the proposed driveway(s).

III. ASSESSMENT OF POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS

Instructions: Explain direct and indirect adverse impacts, including those arising from general construction and operations. For every answer explain why significant adverse impact is considered likely or unlikely to result. Positive impact may also be listed and explained.

Also, state the source of information or other basis for the answers supplied. Such environmental information should be acquired at least in part by field inspection.

A. Open Space and Recreation

1. Might the project affect the condition, use, or access to any open space and/or recreation area?

Explanation and Source: No. The site is currently 100% developed, with a vacant industrial building and asphalt paving. There are no open spaces or recreation areas on or adjacent to the site.

(Source: Project Proponent)

2. Is the project site within 500 feet of any public open space, recreation, or conservation land?

Explanation and Source:

No. The site is adjacent to the Southeast Expressway and manufacturing, industrial and warehouse uses. (Source: Project Proponent)

B. Historic and Archaeological Resources

1. Might any site or structure of historic significance be affected by the project? (Prior consultation with Massachusetts Historical Commission is advised.)

Explanation and Source:

No. The site does not contain any structure of historical significance and is located in an area of primarily industrial, manufacturing and warehouse uses.

(Source: Project Proponent, after consultation with Massachusetts Historical Commission)

2. Might any archaeological site be affected by the project? (Prior consultation with Massachusetts Historical Commission is advised.)

Explanation and Source:

No. The site is in an area of no known archaeological significance.

(Source: Project Proponent, after consultation with Massachusetts Historical Commission)

C. Ecological Effects

1. Might the project significantly affect fisheries or wildlife, especially any rare or endangered species? (Prior consultation with the Massachusetts Natural Heritage Program is advised).

Explanation and Source:

No. Since the Project is located in an area surrounded by industrial, manufacturing and warehouse uses and will not alter any undeveloped land, the Project will have no impact on any fisheries or wildlife, including any rare or endangered species.

(Source: Project Proponent, after consultation with Massachusetts Natural Heritage Program)

2. Might the project significantly affect vegetation, especially any rare or endangered species of plant? (Prior consultation with the Massachusetts Natural Heritage Program is advised.)

(Estimate approximate number of mature trees to be removed: 5)

Explanation and Source:

No. Since the Project is located in an area surrounded by industrial, manufacturing and warehouse uses and will not alter any undeveloped land, the Project will have no impact on any vegetation, including any rare or endangered species of plant.

(Source: Project Proponent, after consultation with Massachusetts Natural Heritage Program)

3. Agricultural Land. Has any portion of the site been in agricultural use within the last 15 years?

If yes, specify use and acreage.

Explanation and Source:

No. From approximately 1953 to 1985 the site was used for meat processing and refrigerated warehousing. In 1985 the processing and warehousing business was closed and the site vacated.

(Source: Project Proponent, after review of site history)

D. Water Quality and Quantity

1. Might the project result in significant changes in drainage patterns?

Explanation and Source:

No. The site is currently totally paved. The Project will result in improvement to site drainage through collection of storm water in a closed system.

(Source: Cannon/Yan - Project Architect)

2. Might the project result in the introduction of any pollutants, including sediments, into marine waters, surface fresh waters or ground water?

Explanation and Source:

No. See D.1 Above. Also, Project wastewater will be discharged into the municipal sewer system.

(Source: Cosentini Associates - Project Mechanical Engineer)

3. Does the project involve any dredging? No X Yes _____ Volume _____. If 10,000 cy or more, attach completed Standard Application Form for Water Quality Certification, Part I (314 CMR 9.02(3), 9.90, DEQ's Division of Water Pollution Control)

4. Will any part of the project be located in flowed or filled tidelands, Great Ponds, or other waterways? (Prior consultation with the DEQE and CZM is advised.)

Explanation and Source:

Although the Project will be located on filled tidelands, the site is approximately one (1) mile from the waterfront, is separated from the waterfront by many public roads and is not the "coastal zone" designated by EOEA. DEQE's administrative policy is not to require a license for a project on filled tidelands which is such a distance from the waterfront and not located in the designated coastal zone.

(Source: Goodwin, Procter & Hoar - Project Legal Counsel, after consultation with DEQE and CZM)

5. Will the project generate or convey sanitary sewage? No _____ Yes X

If Yes, Quantity: 58,167 gallons per day

Disposal by: (a) Onsite septic systems Yes _____ No X
(b) Public sewerage systems (location; average and peak daily flows to treatment works) Yes X No _____

Explanation and Source:

There are no regulatory criteria for generation of sanitary sewage by laboratory uses. Using criteria based on the consulting engineer's experience and assuming 310,150 square feet of laboratory space, then $(310,150 \times 115 \text{ gpd})/1,000 = 35,667 \text{ gpd}$. Using the Title V Standard for office use of 75 gpd and assuming 300,000 square feet of office space, then $(300,000 \times 75 \text{ gpd})/1,000 = 22,500 \text{ gpd}$, for a total of 58,167 gpd. Sanitary sewage will be conveyed to the MWRA treatment system. (Source: Cosentini Associates)

6. Might the project result in an increase in paved or impervious surface over a sole source aquifer or an aquifer recognized as an important present or future source of water supply?

Explanation and Source:

No. The Project site is currently totally paved and does not overlay a sole source aquifer or an aquifer recognized as an important present or future source of water supply.

(Source: City of Boston Water & Sewer Commission)

7. Is the project in the watershed of any surface water body used as a drinking water supply?

Explanation and Source:

No. The Project is not located within the watershed of any surface water body used as a drinking water supply.

(Source: City of Boston Water & Sewer Commission)

8. Are there any public or private drinking water wells within a 1/2-mile radius of the proposed project?

Explanation and Source:

No. All of Boston's drinking water comes from the reservoir sources located outside of city.

(Source: City of Boston Water & Sewer Commission)

9. Does the operation of the project result in any increased consumption of water? Unknown
Approximate consumption 199,000 gallons per day. Likely water source(s) City of Boston

Explanation and Source:

Water consumption will include approximately 64,000 gallons per day for sanitary sewer and general water use (assuming sanitary sewage of 58,167 gpd amounts to 90% of total daily water use) and approximately 135,000 gallons per day during peak air conditioning load (assuming consumption of 45 gpd/ton of refrigeration and 3,000 tons of Project refrigeration). This is the total anticipated water consumption. We do not know the net increase over the prior water consumption of the site. (Source: Cosentini Associates)

E. Solid Waste and Hazardous Materials

1. Estimate types and approximate amounts of waste materials generated, e.g., industrial, domestic, hospital, sewage sludge, construction debris from demolished structures. How/where will such waste be disposed of?

Explanation and Source:

Demolition of the existing building and Project excavation will result in solid waste which will be disposed of in an appropriate manner. The Project tenants are not yet known, therefore it is unknown whether tenants will generate any such waste materials and, if so, what types or amounts of materials they would generate. If such generation occurs then the Project Proponent will require that tenants comply with all federal, state and local laws and regulations with respect to generation, storage and disposal of such waste.

(Source: Project Proponent)

2. Might the project involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials?

Explanation and Source:

The Project tenants are not yet known, therefore it is unknown whether tenants will generate any such hazardous materials and, if so, what types or amounts of materials they would generate. If such generation occurs then the Project Proponent will require that tenants comply with all federal, state and local laws and regulations with respect to generation, storage and disposal of such hazardous materials.

(Source: Project Proponent)

3. Has the site previously been used for the use, generation, transportation, storage, release, or disposal of potentially hazardous materials? To the best knowledge of the Project

Explanation and Source: Proponent based on a c. 21E site assessment report prepared

for the Proponent, the site has not previously been used for the use, generation, transportation, storage or disposal of potentially hazardous materials. Releases of both petroleum projects and friable asbestos occurred at the site prior to its acquisition by the Proponent, both of which were cleaned up to the satisfaction of DEQE. (Source: DEQE Northeast Region File #'s ERB-N87-811 & MB-017(024)) In addition, the Project Proponent has removed a PCB-contaminated transformer and soil, after notification to DEQE and compliance with DEQE requirements.

F. Energy Use and Air Quality

1. Will space heating be provided for the project? If so, describe the type, energy source, and approximate energy consumption.

Explanation and Source:

Each building will be heated by two (2) gas-fired, low-pressure fire tube hot water boilers. Each boiler will be rated for approximately 65% of the heating load and each boiler will generate 700 boiler horsepower of energy output. The energy consumption for the Project will be approximately 105,000 BTU/SF/YEAR.

(Source: Cosentini Associates)

2. Will the project require process heat or steam? If so, describe the proposed system, the fuel type, and approximate fuel usage.

Explanation and Source:

No. (Source: Cosentini Associates)

3. Does the project include industrial processes that will release air contaminants to the atmosphere? If so, describe the process (type, material released, and quantity released).

Explanation and Source:

No. The Project is a biomedical research facility and will not involve industrial processes that release air contaminants.
(Source: Cosentini Associates)

4. Are there any other sources of air contamination associated with the project (e.g. automobile traffic, aircraft traffic, volatile organic compound storage, construction dust)?

Explanation and Source:

Yes. Vehicular traffic associated with the Project will result in normal automobile emissions, but the overall effect on air quality will be negligible due to the large volumes of existing traffic on Southampton Street and the Southeast Expressway. Construction dust will be controlled through normal construction dust mitigation practices. Project tenants are unknown, but if tenants store volatile organic compounds then the Project Proponent will require that tenants comply with all federal, state and local laws and regulations with respect to such storage. (Source: Vanasse Hangen Brustlin - Project Consulting Engineer)

5. Are there any sensitive receptors (e.g. hospitals, schools, residential areas) which would be affected by air contamination caused by the project?

Explanation and Source:

No. The site is surrounded by highways and industrial, manufacturing and warehouse uses
(Source: Project Proponent)

G. Noise

1. Might the project result in the generation of noise?

(Include any source of noise during construction or operation, e.g., engine exhaust, pile driving, traffic.)

Explanation and Source:

Yes. The Project will generate normal construction-related noise. However, the operation of the Project will not result in the generation of noise.
(Source: Project Proponent)

2. Are there any sensitive receptors (e.g., hospitals, schools, residential areas) which would be affected by any noise caused by the project?

Explanation and Source:

No. The site is surrounded by highways and industrial, manufacturing and warehouse sites.
(Source: Vanasse Hangen Brustlin and Project Proponent)

3. Is the project a sensitive receptor, sited in an area of significant ambient noise?

Explanation and Source:

No. The Project, a biomedical research facility, is not a sensitive receptor.
(Source: Vanasse Hangen Brustlin and Project Proponent)

H. Wind and Shadow

1. Might the project cause wind and shadow impacts on adjacent properties?

Explanation and Source:

No. The Project will be designed to minimize wind and shadow impacts on adjacent properties.
Source: Cannon/Yan

I. Aesthetics

1. Are there any proposed structures which might be considered incompatible with existing adjacent structures in the vicinity in terms of size, physical proportion and scale, or significant differences in land use?

Explanation and Source:

No. The surrounding industrial, manufacturing and warehouse structures are on a scale compatible to the scale of the Project and do not present uses which are incompatible with the Project.
(Source: Cannon/Yan)

2. Might the project impair visual access to waterfront or other scenic areas?

Explanation and Source:

No. The Project is not located near waterfront or other scenic areas.
(Source: Cannon/Yan)

The Project is not inconsistent with current federal, state and local land use, transportation, open space, recreation and environmental plans and policies.
(Source: Project Proponent)

V. FINDINGS AND CERTIFICATION

(NAME) Boston Globe (Date) June 21, 1988
Boston Herald June 21, 1988

June 15 1988 David Randall _____
Date Signature of Responsible Officer or Project Proponent Date

David Randall _____
Name (print or type)

Address One Memorial Drive
Cambridge, MA 02142

Telephone Number 494-1111

N/A _____
Signature of person preparing ENF (if different from above)

Name (print or type)

Address _____

Telephone Number _____



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

MICHAEL S. DUKAKIS
GOVERNOR

JAMES S. HOYTE
SECRETARY

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Boston Science Center
PROJECT LOCATION : Boston
EOEA NUMBER : 7111R
PROJECT PROPONENT : Congress Group Ventures, Inc.
DATE NOTICED IN MONITOR : June 28, 1988

Pursuant to the Massachusetts Environmental Policy Act (G.L., c.30, s.61-62H) and Sections 11.04 and 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that the above project requires the preparation of an Environmental Impact Report.

By agreement between the development group, the BRA and my office the attached scope for the BRA's Development Review Procedures will serve as the scope for the required EIR pursuant to MEPA with the following exceptions.

Appendix 1 and Appendix 3 of the BRA scope are issues beyond my jurisdiction and, therefore, are not required pursuant to MEPA. I suggest, however, that for the sake of convenience, that they be included in the single document that will serve as compliance with both MEPA and BRA Development Review.

August 25, 1988

DATE

JAMES S. HOYTE
JAMES S. HOYTE, SECRETARY

BOSTON REDEVELOPMENT AUTHORITY

REQUIRED SUBMISSION MATERIALS
BOSTON SCIENCE CENTER

PROJECT DESCRIPTION

PROJECT NAME: Boston Science Center
PROJECT LOCATION: 301 Southampton Street
DEVELOPER: Southmed Limited Partnership
PROJECT NOTIFICATION: June 23, 1988

The proposed project includes the demolition of the existing, vacant Colonial meat packing and processing plant and the construction of two new biomedical research facilities with related office space and parking. The applicant has proposed two new eight story buildings with a two level parking facility, one level of which is at grade and the other level of which is below grade, under both buildings and extending under the area which separates the two buildings. The characteristics of the proposed project include:

Total SF:	610,150
Parking Spaces:	530
Proposed Height:	151 feet
Proposed FAR:	3.0
Proposed Start of Construction:	1989 - 1st Quarter
Proposed Completion:	1990 - 4th Quarter

SUBMISSION REQUIREMENTS

In addition to full-size scale drawings as specified, 20 copies of a bound booklet containing all submission materials reduced to size 8 1/2" x 11", except where otherwise specified, are required.

In this list of required scoping materials, information on two alternatives is requested for various categories of review. These alternatives include:

Option A: The project as proposed at an FAR of 3.0;

Option B: The project at an as-of-right FAR of 2.0.

Please refer to each category of review to determine which option(s) need to be analyzed.

I. GENERAL INFORMATION

1. Applicant Information

A. Development Team

1. Names

- a. Developer (including description of development entity)
- b. Attorney
- c. Project Consultants

2. Business Address and telephone for each

3. Designated contact for each

4. Description of current or formerly-owned developments in Boston

B. Legal Information

1. Legal judgments or actions pending concerning the proposed project

2. History of tax arrears on property owned in Boston by development team

3. Evidence of site control over the project area, including current ownership and purchase options of all parcels in the proposed project, all restrictive covenants and contractual restrictions affecting the proponent's right of ability to accomplish the proposed project and the nature of the agreements for securing parcels not owned by the prospective developer.

2. Financial Information

(See Appendix 1 for required financial information)

Development and Operating Pro Formas should be provided both for Option A and Option B.

A. Full disclosure of names and addresses of all financially involved participants and bank references

B. Development Pro Forma

C. Ten Year Operating Pro Forma

3. Project Area

- A. Description of metes and bounds of project area

4. Public Benefits

- A. Development Impact Project Contribution and Jobs Contribution Grant specifying amount of housing linkage and jobs linkage contributions and method of housing linkage contribution (housing payment or housing creation)
- B. Increase in tax revenues, specifying existing and estimated future annual property taxes
- C. Anticipated employment levels including the following:
1. Estimated number of construction jobs
 2. Estimated number of permanent jobs
- D. Submission of Boston Residents Construction Plan in accordance with the Boston Jobs Policy requiring that 50, 25, and 10 percent of person-hours in construction jobs on publicly-assisted or large-scale private commercial projects be worked by Boston residents, minorities and women.
- E. Submission of voluntary Employment Opportunity Plan presenting good-faith efforts to achieve the goal that the profile of permanent employees in the building be 50 percent Boston residents.

5. Regulatory Controls and Permits

- A. Existing zoning requirements, zoning computation forms, and any anticipated requests for zoning relief
- B. Anticipated permits required from other local, state, and federal entities with a proposed application schedule
- C. If the proposed project is subject to the Massachusetts Environmental Policy Act (MEPA), submission of required documentation including copies of the Environmental Notification Form and a statement as to whether the applicant will coordinate the submission of materials required by MEPA with the submission of materials required by this scope

6. Community Groups

- A. Names and addresses of project area owners, displacees, abutters, and also any community groups which, in the opinion of the applicant, may be substantially interested in or affected by the proposed project
- B. A list of meetings proposed and held with interested parties

II. TRANSPORTATION COMPONENT

The following requirements incorporate comments by the Boston Transportation Department regarding transportation issues and objectives for the Boston Science Center. The Boston Transportation Department's comments on the Scope of Services prepared by the firm Vanasse Hangen Brustlin, Inc. are provided in Appendix 2 and offer specific requirements as to the methods of analyzing transportation impacts.

The following must be submitted for Option A:

1. Parking

- A. Existing parking conditions in the study area
 - 1. Parking Characteristics in proximity to the site
 - 2. The supply of parking, both on and off street
- B. Number of spaces provided indicating public and private allocation
- C. Proposed project's impact on demand for parking
- D. Parking plan, including layout, access, size of spaces, the level of utilization of spaces by different user types, and the degree to which joint use of spaces can result in lower parking space demand

2. Loading

- A. Number of docks
- B. Location and dimension of docks
- C. Estimated size and types of vehicles serving the site and the ability of loading docks to accommodate those vehicles

3. Access

- A. Size and maneuvering space for all vehicles on site or in public right-of-way; and the internal maneuvering space for trucks of all sizes, especially with regard to the disruption of on-street traffic flow by trucks backing in or out
- B. Access, curb cuts, and/or sidewalk changes required with specific references to vehicular volumes at each driveway accessing the site
- C. Analyses of access to loading docks under a variety of access scenarios

4. Vehicular Traffic

- A. Projection of vehicular traffic demand and generation (daily and a.m. and p.m. peak hours) and directional distribution
- B. Analyses of the existing conditions and the impact of the proposed project at the following intersections:
 - o Southampton/S.E. Expwy northbound on/off ramps
 - o Southampton/S.E. Expwy southbound on ramp
 - o Andrew Square
 - o Southampton/Glynn Way
 - o Southampton/Newmarket Square
 - o Southampton/Mass. Ave./S.E. Expwy. on/off ramps
 - o Boston St./Frontage Rd.
 - o Edward Everett Square
 - o Columbus Circle
- C. Modal split and vehicle occupancy analysis
- D. Estimated taxi trips to the site
- E. Estimated truck and service vehicle traffic to the site

5. Public Transportation

- A. Location and availability of public transportation facilities
- B. Usage, capacity, and planned improvements to the existing system
- C. Peak-hour demand and capacity analysis

6. Pedestrian Circulation

- A. Pedestrian conditions in the study area, including identification of pedestrian activity, circulation deficiencies and barriers, and measures to improve such conditions
- B. Pedestrian demand analysis on project area
- C. Connections to public transportation station stops
- D. Connections to the proposed project across Southampton Street and the southbound expressway ramp

7. Access Plan

- A. Measures to manage and reduce parking demand and optimize use of available parking spaces, including:
 - o Ride-sharing incentives and information dissemination
 - o Set-asides for high occupancy vehicles (specify number and location)
- B. Measures to encourage public transportation use and mitigate project impact on public transit including:
 - o Mass transit information dissemination
 - o MBTA pass sales and subsidies
- C. Measures to reduce peaking, including:
 - o Travel demand modifications
 - o Encouragement of flexible work hours
 - o Restrictions on service and goods deliveries
- D. Measures to mitigate project impacts, including:
 - o Improvements in pedestrian environment
- E. Measures to mitigate construction impacts, including:
 - o Scheduling construction to ensure compatibility with the Central Artery/Third Harbor Tunnel project
 - o Time and routes of truck movements and materials deliveries
 - o Worker parking and commuting plan

- o Location of construction staging areas
- o Measures to protect the public safety
- o Measures to ensure access along Southampton Street and the Expressway ramp
- o Storage of materials and equipment .

A Construction Management Plan must be submitted to the Boston Transportation Department.

F. Monitoring Program

A long term program to monitor the travel behavior of project tenants and other users of the site and the effectiveness of mitigation measures must be submitted. Information must include travel mode, vehicle occupancy rate, and employee origin/destination surveys.

In addition, a detailed sensitivity analysis must be submitted which examines the marginal impact of selecting Option A over Option B.

III. ENVIRONMENTAL PROTECTION COMPONENT

An analysis of wind impacts must be performed for Options A and B. Other analyses must be done for Option A only at this time.

1. Wind

A qualitative analysis of the potential wind impacts of the proposed buildings at the pedestrian level is required. This analysis must determine the potential pedestrian level winds adjacent to and in the vicinity of the project site and shall identify any areas where wind velocities are expected to exceed acceptable levels, including the Authority's guideline of an effective gust velocity of 31 mph not to be exceeded more than 1% of the time.

Particular attention must be given to public and other areas of pedestrian use, including, but not limited to, building entrances, sidewalks adjacent to the buildings, and the central plaza.

For areas where wind speeds are projected to exceed acceptable levels, measures to reduce wind speeds and to mitigate potential adverse impacts must be identified.

Should the qualitative analysis indicate the possibility of excessive pedestrian level wind speeds,

additional studies, including wind tunnel testing, may be required at a later date.

2. Shadow

A shadow analysis is required for existing and build conditions for the hours of 9:00 a.m., 12:00 noon, and 3:00 p.m. for the vernal equinox, summer solstice, autumnal equinox, and winter solstice. It should be noted that due to time differences (daylight savings vs. standard), the autumnal equinox shadows would not be the same as the vernal equinox shadows and therefore separate shadow studies are required for the vernal and autumnal equinoxes.

The shadow impact analysis must include net new shadow as well as existing shadow and must clearly show the incremental impact of the proposed buildings.

Particular attention must be given to existing or proposed public open spaces and major pedestrian areas, including, but not limited to, the sidewalks adjacent to the buildings and the central plaza area.

Design or other mitigation measures to limit or minimize any adverse shadow impact must be identified.

3. Air Quality

A description of the garage exhaust system, and of the exhaust system for the individual laboratories, including location of exhaust vents and specifications, and an analysis of the impact on pedestrian level air quality from operation of the exhaust systems is required. Measurements to avoid any violation of air quality standards must be described.

4. Geotechnical Impact

An analysis of existing sub-soil conditions, potential for ground movement and settlement during excavation and removal of existing piles, and potential impact on adjacent buildings and utility lines and the Dorchester Drain is required. This analysis must also include a description of the foundation construction methodology, the amount and method of excavation, and measures to prevent any adverse effects on adjacent buildings and utility lines.

5. Hazardous Wastes

The identification of the potential for the presence or disposal of any oil or hazardous wastes and of buried tanks on or within the site is required. It is

recommended that a site assessment in compliance with M.G.L. Chapter 21E be submitted.

To the extent possible, the identification of the generation, storage, and disposal of any hazardous wastes or contaminants, including regulated biological substances, during operation of the project also is required.

6. Construction Impacts

A construction impact analysis is required which includes a description and evaluation of the following:

- A. Potential dust and pollutant emissions and mitigation measures to control these emissions
- B. Potential noise impact and mitigation measures to minimize increase in noise levels
- C. Location of construction staging areas and construction worker parking
- D. Construction Schedule, including hours of construction activity
- E. Access routes for construction trucks and anticipated volume of construction truck traffic
- F. Impact on existing groundwater levels and measures to control groundwater
- G. Method of demolition of the existing building, control of emissions, and disposal of waste, including identification of disposal site
- H. Measures to protect the public safety

7. Rodent Control

An analysis of the impact of project construction on rodent populations and a description of the proposed rodent control program and compliance with applicable City and State regulatory requirements is required.

IV. URBAN DESIGN COMPONENT

Urban design materials must be submitted for Option A.

Because of the relative lack of an existing urban design context in the immediate area, a rigorous urban design analysis of the site must be undertaken. The purpose of this analysis is to identify any important elements on or

adjacent to the site that shape the siting and massing of the Boston Science Center and other potential future development in the area.

A description of elements on or adjacent to the site that shape the siting and massing a project in this location, and how these elements address the issues of access, orientation, massing, site planning, and urban fabric must be submitted. A diagram at 1" = 100' depicting these elements must accompany the analysis. This diagram must include the area bounded by Southampton Street to the north, the Southeast Expressway entrance/exit ramp to the northeast, Boston Street to the east, Massachusetts Avenue to the southwest, and the New York, New Haven and Hartford rail line to the west.

In addition, the applicant must show the degree to which the alternatives conform to existing urban design requirements as set forth in the Boston Zoning Code, such as parapet setback requirements, side yard and rear yard requirements, and other applicable regulations.

In order to determine that the proposed project responds to these elements adequately, the following items must be submitted:

1. Written description of program elements and space allocation for each element
2. Plan for the surrounding area and district and sections at an appropriate scale (1" = 100' or larger) showing relationships of the proposed project to the surrounding area and district:
 - A. massing
 - B. building height
 - C. scaling elements
 - D. open space
 - E. major topographical features
 - F. pedestrian and vehicular circulation
 - G. land use
3. Black and white 8"x10" photographs of the site and neighborhood
4. Sketches and diagrams to help clarify design issues and massing options for both Option A and Option B. A detailed written sensitivity analysis of these design

issues and massing options should accompany the sketches.

5. Eye-level perspective (reproducible line drawings) showing the proposal in the context of the surrounding area
6. Aerial views of the project
7. Site sections at 1" = 20' or larger showing relationships to adjacent buildings and spaces
8. Site plan at an appropriate scale (1" = 20' or larger) showing:
 - A. General relationships of proposed and existing adjacent buildings and open space
 - B. Open spaces defined by buildings on adjacent parcels and across streets
 - C. General location of pedestrian ways, driveways, parking, service areas, streets, and major landscape features
 - D. Pedestrian, handicapped, vehicular and service access and flow through the parcel and to adjacent areas
 - E. Survey information, such as existing elevations, benchmarks, and utilities
 - F. Phasing possibilities
 - G. Construction limits
9. Massing model at 1" = 40' and a study model at 1" = 16' showing the facade design
10. Drawings at an appropriate scale (e.g., 1" = 8') describing architectural massing, facade design and proposed materials including:
 - A. Building and site improvement plans
 - B. Elevations in the context of the surrounding area
 - C. Sections showing organization of functions and spaces
 - D. Preliminary building plans showing ground floor and typical upper floors

11. Proposed schedule for submittal of design development materials

Appendix 3 includes a list of materials required for the Design Development and Contract Documents submissions.

V. HISTORIC RESOURCES COMPONENT

No study is required at this time.

VI. INFRASTRUCTURE SYSTEMS COMPONENT

An infrastructure impact analysis must be performed for Options A.

The applicant must submit a description of the proposed project's anticipated electricity consumption and energy requirements, including electricity, gas, steam and other utilities, but not necessarily thermal transfer values or insulation efficiency, except as a possible mitigation measure. The project's impact on other infrastructure components, such as telephone and other dedicated telecommunications lines must be addressed.

The applicant must include an evaluation of these volumes' impacts on the capacity and adequacy of existing water, sewerage, energy, and service electrical systems and the need reasonably attributable to the project for additional system facilities.

Effects on abutting or interfacing utilities should be recognized, such as the impact on the drain along the railroad berm. Special measures being taken to help guard against the release of "live" biological waste should be cited.

APPENDIX 1: REQUIRED FINANCIAL INFORMATION

REQUIRED FINANCIAL INFORMATION -- BOSTON SCIENCE CENTER

DEVELOPMENT PROFORMA includes all the information normally found in a development proforma, by phase. This includes, but is not limited to:

Land acquisition costs, per land square foot and total, by parcel.

Attribution of acquisition expense over project components. (per FAR square foot residential, office, parking, etc.)

All hard costs on a per-unit and total basis, by phase. (disaggregated into base building, tenant improvement work, rehabilitation work, residential finishes, garage cost, site work, furniture, fixtures and equipment, etc.)

All soft costs on a per-unit and total basis, by phase. (disaggregated into individual line items such as architectural, engineering, legal, accounting and developer's fees and any other professional fees, insurance, permits, real estate tax during construction, etc.)

All contingencies on a per-unit and total basis, by phase (specify whether contingency is on hard cost, soft cost, or total cost).

All assumptions regarding financing terms on acquisition, pre-development, and construction loans, by phase (including financing fees, interest rates, terms, drawdown assumptions, terms, participations, amortization).

Calculation of housing and jobs linkage obligation in accordance with Articles 26A and B, and anticipated payment method (over term of obligation or on a net present value basis).

Any other project-related expenses not within any of the above categories.

Calculation of total development cost by component, including total and per unit breakdown (e.g. per square foot office, residential, retail, etc., per parking space, etc.)

Sources of debt and equity for total project costs.

Appropriate return measures (return on equity, return on total development cost, internal rate of return; specify method of calculation and hurdle rates).

10-YEAR OPERATING PROFORMA includes all the information normally found in an operating proforma, on a yearly basis. This includes, but is not limited to:

Tabulation of gross and net (leasable) square feet for all commercial space.

Schedule of all rents on a per square foot and total basis (including anticipated garage rates and occupancy).

Anticipated operating expenses and real estate taxes on per square foot and total basis, and clear explanation of division of expenses between owner and tenant (includes all commercial space, hotel, and garage)

All other expense and vacancy assumptions set forth to calculate cash available for debt service.

Anticipated leasing patterns (5-yr, 10-yr, etc.), lease-up rates and calculation of operating deficits if any.

Tenant inducements including free rent, tenant improvement allowances, etc.

Calculation of debt service, before tax cash flow, debt coverage ratios.

APPENDIX 2:

DRAFT TRANSPORTATION ACCESS PLAN SCOPE



BOSTON
TRANSPORTATION
DEPARTMENT

ONE CITY HALL PLAZA ROOM 721
BOSTON, MASSACHUSETTS 02201
(617) 725-4680

BOSTON SCIENCE CENTER

DRAFT ACCESS PLAN SCOPE

The Access Plan should consist of three primary components: an analysis of transportation impacts, a program of mitigation measures, and a description of post-construction monitoring procedures. The Access Plan should be submitted together with, and should supplement, other development impact analyses prepared for Boston Redevelopment Authority review.

Background Information.

- o Project name and street address
- o Project location including adjacent intersections
- o Project sponsor's name, address, telephone number, and name of contact person
- o Anticipated construction starting and completion dates
- o Current zoning designation of the project, and code requirements with regard to parking, loading bays and building scale
- o Required permits, variances, and licenses.

Project description

- o Project area (square feet)
- o Building height and number of stories
- o Floor-area ratio (FAR)
- o Number of on-site parking and loading spaces.

Submit an 8-1/2 by 11 inch section of a 1:400 scale map showing the project location, surrounding streets, and their circulation pattern. Indicate the Study Area boundary and the intersections to be analyzed. On a separate map also identify nearby bus and rapid transit routes and stops and/or public parking facilities.

Submit a site plan for the project indicating pedestrian and vehicular circulation patterns; project entrances and exits, drop-off and pick-up locations and taxi stands (if applicable); and curb cut widths. Dumpster locations, loading docks, and their storage and receiving areas should be identified.

Provide a plan that describes the physical layout of the proposed parking facility. Include the following information.

- o Number of spaces on each level
- o Location and dimensions of parking spaces, ramps, aisles, ceiling heights , turning radii and curb cuts
- o Queuing space and location of entry/exit gates
- o Location of carpool, vanpool, handicap and bicycle spaces

I. Transportation Impacts

For each of the categories of impact listed below, analysis should be performed which reveals the following:

- o Existing Conditions;
- o Conditions under a "no-build" scenario in the target year (one year after project completion);
- o Conditions under a "build" scenario in the target year, given the project as proposed.
- o Conditions under a "build" scenario, given a project of a scale permissible as of right.

No-build and build scenario analysis should take into account both existing conditions and planned development which is expected to be completed by the target year. A complete list of planned projects will be provided by the BRA.

A. Traffic Analysis

This section consists of analysis of existing and future traffic conditions in the area surrounding the project. Traffic counts should be taken to determine existing levels of service and to identify deficiencies in the roadway network. Planned background and project-generated traffic volumes should be added to the base traffic network to indicate future conditions. The following intersections should be analyzed for the AM, PM and mid-day peak hours.

1. Southampton/S.E.Expwy. northbound on/off ramps
2. Southampton/S.E.Expwy. southbound on ramp
3. Andrew Square
4. Southampton/Glynn Way
5. Southampton/Newmarket Square
6. Southampton/Mass. Ave./S.E.Expwy. on/off ramps
7. Boston St./Frontage Rd.
8. Edward Everett Square
9. Columbus Circle

Under the Build scenario, assumptions about the project's modal split, vehicle occupancy, mid-day trip generation, and constraints imposed by limits on parking availability (if any) should be made explicit.

B. Parking Analysis

Based on assumptions used in the preceding section about trip generation, modal split and vehicle occupancy, estimates of parking demand should be made and compared with proposed supply. In the case of a parking shortfall, allocation of parking should be detailed. If more than a single eight-hour shift is expected, parking accumulation and peak demand estimates should be presented. Plans for visitor parking should also be provided.

C. Transit Analysis

Impacts on the transit system should be analyzed in terms of new transit users in the AM and PM peak periods, separated into service types. Load factors for each transit system should be presented, and compared with MBTA maximum acceptable loads.

D. Delivery and Service Vehicle Analysis

Supply/demand relationship for delivery and service vehicle loading facilities should be analyzed. Large and small trucks should be differentiated, and the parking/loading spaces for both groups indicated.

E. Site Circulation and Vehicular Access.

Project driveways should be analyzed in terms of their impact on and compatibility with S.E.Expressway on-ramp. Sight distances should be provided. Internal circulation patterns should be described.

F. Pedestrian Analysis.

In conjunction with preceding sections, the pedestrian analysis should both show the impact of the project on local pedestrian facilities and describe the conditions which pedestrian users of the project will encounter. Particular attention should be paid to the following items.

- o The pathway to the Andrew Square MBTA station. The effect of conditions along this pathway upon modal choice should be explicitly considered.
- o Accessibility of the site from Southampton St. across the S.E.Expressway ramp.
- o Availability of support services, e.g. restaurants, within walking distance of the project site. Effect of such conditions on modal choice.

G. Construction Management

The BTD requires the submission of Construction Management Plans for all major construction projects, detailing the construction period impacts and the measures necessary to mitigate them. The Access Plan should contain a general discussion of construction management issues and a list of mitigation measures to deal with them.

Specific issues to be addressed in the Construction Management section include the compatibility of the project with the I-90/I-93 project. The project's construction schedule should be compared with that of the Seaport Access Road, the South Bay interchange, and the South Boston Bypass.

The Construction Management program and procedures are outlined in separate guidelines available from the Operations Division of the Boston Transportation Department.

II. Mitigation Measures.

Proposed measures to mitigate traffic impacts (trip generation, degradation of levels of service, deficiencies in project accessibility, shortages of parking, etc.) should be detailed. Extension of existing measures, such as the bus shuttle operated by the B.U. Medical Center, should be described as well as new measures. Suitable mitigation measures include incentives to transit use, shuttle services from remote parking facilities, and improvement of pedestrian connections to the Andrew Square station.

III. Monitoring.

An outline should be provided of proposed ongoing efforts to monitor (a) the impacts of the project and (b) compliance with, and the effectiveness of, mitigation measures.

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APPENDIX 3:
DESIGN DEVELOPMENT AND CONTRACT DOCUMENTS
SUBMISSION MATERIALS

Phase II Submission: Design Development

1. Revised written description of project
2. Revised site sections
3. Revised site plan showing:
 - a. Relationship of the proposed building and open space to existing adjacent buildings, open spaces, streets, and buildings and open spaces across streets
 - b. Proposed site improvements and amenities including paving, landscaping, lighting and street furniture
 - c. Building and site dimensions, including setbacks and other dimensions subject to zoning requirements
 - d. Any site improvements or areas proposed to be developed by some other party (including identification of responsible party)
 - e. Proposed site grading, including typical existing and proposed grades at parcel lines
4. Dimensioned drawings at an appropriate scale (e.g., 1" = 8') developed from approved schematic design drawings which reflect the impact of proposed structural and mechanical systems on the appearance of exterior facades, interior public spaces, and roofscape including:
 - a. Building plans
 - b. Preliminary structural drawings
 - c. Preliminary mechanical drawings
 - d. Sections
 - e. Elevations showing the project in the context of the surrounding area as required by the Authority to illustrate relationships or character, scale and materials
5. Large-scale (e.g., 3/4" = 1'-0") typical exterior wall sections, elevations and details sufficient to describe specific architectural components and methods of their assembly
6. Outline specifications of all materials for site improvements, exterior facades, roofscape, and interior public spaces
7. Eye-level perspective drawings showing the project in the context of the surrounding area

8. Samples of all proposed exterior materials
9. Complete photo documentation (35 mm color slides) of above components including major changes from initial submission to project approval

Phase III Submission: Contract Documents

1. Final written description of project
2. A site plan showing all site development and landscape details for lighting, paving, planting, street furniture, utilities, grading, drainage, access, service, and parking
3. Complete architectural and engineering drawings and specifications
4. Full-size assemblies (at the project site) of exterior materials and details of construction
5. Eye-level perspective drawings or presentation model that accurately represents the project, and a rendered site plan showing all adjacent existing and proposed structures, streets and site improvements
6. Site and building plan at 1" = 100' for Authority's use in updating its 1" = 100' photogrammetric map sheets

Phase IV Submission: Construction Inspection

1. All contract addenda, proposed change orders, and other modifications and revisions of approved contract documents which affect site improvements, exterior facades, roofscape, and interior public spaces shall be submitted to the Authority prior to taking effect.
2. Shop drawings of architectural components which differ from or were not fully described in contract documents



BOSTON
TRANSPORTATION
DEPARTMENT

ONE CITY HALL PLAZA ROOM 721
BOSTON, MASSACHUSETTS 02201
(617) 725-4680

August 5, 1988

RECEIVED

AUG 8 1988

OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

Secretary James S. Hoyte
Executive Office of Environmental Affairs
100 Cambridge St.
Boston, MA 02210
ATTN: MEPA Unit

RE: Boston Science Center

Dear Secretary Hoyte:

Thank you for the opportunity to comment on the ENF for the above-
project. On behalf of both our departments, we would like to
submit the following comments.

The Boston Science Center proposal responds to a need in the City
of Boston for medical research facilities. In terms of economic
development, we would encourage the growth of an industry which
holds promise of employment for Boston residents, which supports
the City's hospital and university research activities, and which
offers opportunities to develop new products whose manufacture
will create more jobs. Accordingly, EDIC recognizes the
appropriateness of this land use in the Newmarket area.

However, EDIC and BTD are concerned about the density of the
proposed development, which could overburden the existing
transportation infrastructure, place its users in an unpleasant
environment, and conflict with surrounding land uses and urban
design contexts.

The density of the project raises the following specific concerns,
which the Environmental Impact Report should address.

- Height.

Due to the prevailing northwesterly winter winds, the
height, compounded by a grade differential between the
expressway ramp and Southampton Street, may create a wind
tunnel effect. Drivers' sight lines may also be obstructed.

RAYMOND L. FLYNN, MAYOR
RICHARD A. DIMINO, COMMISSIONER

- Traffic.

Preliminary estimates are that the project would increase volumes on Southampton St. by about 25% to over 18,000 per day. This is a large impact for one project. In addition, mid-day volumes would be substantial, since there is no place within walking distance to have lunch besides a small on-site cafeteria.

The site is hemmed in by the Expressway, the Sears site, and the New Haven & Hartford railroad tracks. The only access is directly off the Expressway ramp. While the existing building already has curb cuts in approximately the same place as proposed for the new project, the old use (a one-story Colonial Meat Packing facility) was a much smaller traffic generator than what is proposed. We will look to the Massachusetts Department of Public Works for guidance on the question of how much traffic these curb cuts should be allowed to generate onto the ramp.

- Transit.

Although the project is less than one-third mile down Southampton St. from the Andrew Square Red Line station, it is a very unpleasant and inhospitable walk, over the Expressway bridge. The potential wind tunnel effect cited above would exacerbate this condition. Such mitigation measures as a shuttle service to the station will be necessary to ensure an appropriate level of transit use.

- Parking.

Given the probable low transit share and the good access to the Expressway, parking demand will be relatively high. While shuttles from the B.U. Medical Center as well as Andrew Station may mitigate this demand, 530 parking spaces may not be enough. However, geotechnical problems apparently constrain the number of underground levels that can be constructed. The EIR should detail these constraints and investigate ways of providing more parking on-site, as well as of minimizing the need for parking.

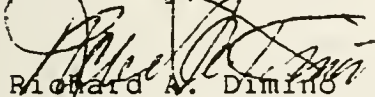
- Compatibility with Central Artery construction.

The project is directly across from the proposed South Boston Bypass. Construction must be coordinated with scheduling for the South Bay interchange work.

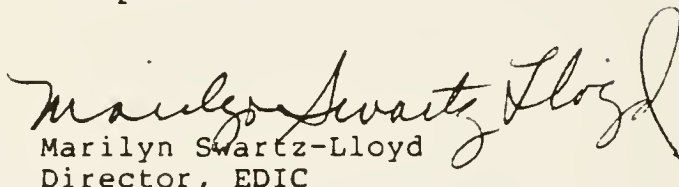
As you know, the project's impacts will also be examined in reports required by the Boston Redevelopment Authority (BRA) and the Boston Transportation Department (BTD). The above comments will be incorporated into a scope for an Access Plan which the BTD will convey to the developer via the BRA. It is anticipated that MEPA's EIR scope will closely parallel the scope issued by the BRA. A draft of the BTD's Access Plan scope is attached.

Thank you for the opportunity to participate in MEPA review of this project. We will look forward to receiving the EIR, and welcome MEPA input into the City's review process.

Sincerely,



Richard A. Dimino
Commissioner, Transportation



Marilyn Swartz-Lloyd
Director, EDIC

7653T

Raymond L. Flynn

Stephen Coyle

One City Hall Square
Boston, MA 02201
722-4300

7.19.88

Secretary James S. Hoyte
Executive Office of
Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RECEIVED

JUL 20 1988

OFFICE OF THE SECRETARY
ENVIRONMENTAL AFFAIRS

Attention: MEPA Unit

Dear Secretary Hoyte:

Re: EOEA #7111R: Boston Science Center

Pursuant to regulations implementing M.G.L., Chapter 30, Sections 62-62H, the Boston Redevelopment Authority has reviewed the above-referenced Environmental Notification Form and submits the following comments.

The proposed project envisions the construction of two 8-story buildings containing 695,000 square feet for a biomedical research facility, with below grade parking for approximately 530 vehicles, on a 5.4 acre parcel of land on Southamptn Street, adjacent to the Southeast Expressway. The project site is located in an industrial/manufacturing area and is next to the proposed Newmarket Industrial District.

According to the Notification Form, the Science Center will increase daily vehicle trips to and from the site by approximately 3,500 vehicles. This will result in a 23% increase in traffic on Southamptn Street. Future redevelopment in the adjacent Newmarket district and the relocation of the Suffolk County House of Correction to this area will add considerable traffic to Southamptn Street. Without appropriate mitigation measures, traffic congestion could be a problem along this street and at nearby intersections. (A traffic impact study prepared for the House of Correction relocation did, in fact, indicate future levels of service of E and F at the Topeka Street and the Massachusetts Avenue/Melnea Cass Boulevard intersections with Southamptn Street.)

The Environmental Impact Report (EIR) which will be required for this categorically included project needs to examine in detail the traffic and circulation impacts of the project on the Expressway and local roadways, the origin and destination (distribution) of this traffic, and the sufficiency of the existing public transportation services to serve the site, and should propose satisfactory mitigation measures to reduce or eliminate any adverse impacts during construction and occupancy. Levels of service analyses are recommended for the Andrew Square and the Southamptn Street/Melnea Cass Boulevard/Massachusetts Avenue intersections. This transportation impact analysis should be performed on both the existing roadway system and on the roadway system proposed by the Central Artery/Third Harbor Tunnel project.

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0The adequacy of the parking proposed for this project also is of concern to the Authority. If sufficient on-site parking is not provided, motorists will be forced to park on adjacent streets or in nearby residential neighborhoods. A parking demand/supply analysis, therefore, should be required for the EIR. In addition, the project proponent has indicated that a shuttle service will be established to connect to the Andrew Square transit station and the BU Medical Center in the South End. The details of the plans for the shuttle service should be described in the Impact Report as well.

Because the project site is located near to the South Boston Market Terminal, particular attention will need to be given to the control of dust emissions during the construction period. In addition, during operation of the research facility, special precautions will need to be implemented to prevent the release of any pollutants, contaminants, or biological hazards which could adversely affect persons in the surrounding areas.

The proposed biomedical facility will be a highly intensive energy user with extremely high HVAC requirements. Water demands also will be high (nearly 200,000 gallons per day). Therefore, the Impact Report should examine the impact of this project on public and private utility resources and the adequacy and capacity of these utilities to serve the requirements of the project.

Lastly, the City's Economic Development and Industrial Commission (E.D.I.C.) has prepared a redevelopment plan for the Newmarket Industrial District, which is located adjacent to the proposed Boston Science Center. Significant developments are slated for this area. The planning and construction of the Science Center needs to be coordinated with the E.D.I.C. plan. Similarly, the Science Center plans need to be coordinated closely with the design of the Central Artery/Third Harbor Tunnel improvements in the vicinity of the project site, since current roadway alignments under consideration could affect the proponent's property.

Because this project is a Development Impact Project subject to Articles 26, 26A, and 26B of the Boston Zoning Code, the Authority will request that additional impacts be explored in areas including, but not limited to, the environment, transportation, infrastructure, and urban design. Recently the project proponent filed a Project Notification Form with the Authority and has requested that the Authority's review and the MEPA review be coordinated through a single set of documents which would address the concerns of both agencies. We concur with this request. The BRA is preparing a scoping determination which may address concerns additional to those outlined in this letter. The set of documents submitted to satisfy the requirements of MEPA and Articles 26, 26A and 26B should be responsive to those issues raised in both the scoping determination and the review of this project pursuant to MEPA.

Sincerely,



Paul Reavis
Assistant Director for
Engineering and Design Services

cc: David Randall
Congress Group Ventures, Inc.

ENF Boston Science Center
City of Boston

COMMENTS OF THE
EXECUTIVE OFFICE OF TRANSPORTATION AND CONSTRUCTION

EOTC has reviewed the ENF for the proposed Boston Science Center in Boston, proposed to include 475,000 gross square feet housing firms engaged in biomedical research. The development will replace a vacant one-story industrial building.

This project appears to have access to and from ramps to the Southeast Expressway. It may therefore be of concern in the design of the approach roads to the Central Artery and Third Harbor Crossing. It may also become involved with any alterations to the Southeast Expressway which are required because of the Central Artery/Third Harbor Crossing project. Specifically, it may become involved with the truck road, and the alterations which are proposed for the Mass. Ave. exists and the connecting roadways which will serve as service roads along the Southeast Expressway to connect to the truck road, the Mass. Ave. exit or other ramps associated with the project.

In developing the DEIR, the proponent should work closely with the design team for the Central Artery/Third Harbor Crossing project. The location of the project suggests that the access to transit at Andrew Square may also play a major role in providing employee access to the site; transit maximization should thus be analyzed. Other creative methods of limiting the introduction of new and additional vehicles to the Southeast Expressway should be explored.

RECEIVED

JUN 5 1971



The Commonwealth of Massachusetts

Executive Office of Transportation & Construction

Office of the Secretary

10 Park Plaza, Room 3510

Boston, MA 02116-3969

Telephone 973-7000

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JUL 18 1988

OFFICE OF THE SECRETARY OF
TRANSPORTATION & CONSTRUCTION

Michael S. Dukakis
Governor

Frederick P. Salvucci
Secretary

and
W.B.T.A. Chairman

DATE: 06-22-88

DATE RECEIVED E.O.T.C. 06-22-88

COMMENTS DUE: 7/18/88

PROJECT PROPONENT: SOUTHMED LIMITED PARTNERSHIP
% CONGRESS GROUP VENTURES, INC.
ONE MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS

PROJECT DESCRIPTION:

BOSTON, MASSACHUSETTS: BOSTON SCIENCE CENTER, 301 SOUTHAMPTON STREET, BOSTON, MASSACHUSETTS: The proposed, to be known as the Boston Science Center, will consist of two eight (8) story buildings for biomedical research containing a total of approximately 610,150 S.F. of laboratory and related office space, with approximately 84,200 S.F. of mechanical equipment space and two floors of structured, partially below-grade parking for approximately 530 automobiles. The project site will also include driveways, exterior lighting, landscaping and other site improvements. The project site is located adjacent to the Southampton Street Expressway and the Southeast Expressway in an area characterized by low-rise manufacturing industrial and warehouse uses.

D.P.W. : CURB CUT PERMIT (RELOCATION OF EXISTING CURB CUT)

COMMENTS ON PROPOSED PROJECT:

1 NO COMMENTS

1 COMMENTS: see Attached

DATE: July 18, 1988

Frederick P. Salvucci
for FREDERICK P. SALVUCCI
SECRETARY



The Commonwealth of Massachusetts

Executive Office of Transportation & Construction

Office of the Secretary

10 Park Plaza, Room 3510

Boston, MA 02116-3969

Telephone 973-7000

TLL (617) 973-7306

RECEIVED
JUL 18 1988
OFFICE OF THE SECRETARY OF
TRANSPORTATION & CONSTRUCTION

Michael S. Dukakis
Governor

Frederick P. Salucci
Secretary

and
M.B.T.A. Chairman

EOTC COMMENTS- ENF BOSTON SCIENCE CENTER
BOSTON, MA
EOEA #7111

EOTC has reviewed the ENF for the Boston Science Center. The project is to contain a total of 694,350 square feet of space used for biomedical research. The site is bounded on two sides by railway right-of-way and by a Sears distribution center on another. Present access to the site is through an existing Southeast Expressway ramp. This project involves a significant addition of traffic in an already heavily congested area. In addition this area is about to undergo major roadway construction with the beginning of the Central Artery-Third Harbor Tunnel project.

In the ENF the proponent needs to address the issue of site access to the project. Because of the complexity of the roadway system in the area, the proponent should propose several alternative schemes for access to the site. Of special concern is the use of the Expressway off-ramp for two way traffic. The proponent should explore possibilities of relocating the ramp to allow for one-way traffic instead of the present two-way traffic flow. At present, planning for the Central Artery-Third Harbor Tunnel is not complete, but plans may call for the use of a service road replacing the present ramp. The proponent should work in conjunction with the design staff for the Central Artery-Third Harbor Tunnel project in planning alternatives for this access ramp. The proponent should also explore other access drives which do not rely on the ramp for access.

In addition, the MBTA is considering locating a commuter rail station for the Midland branch in this immediate vicinity. Working with the MBTA, the Boston Science Center EIR should examine the relationship of the project site with the proposed commuter rail station site and detail steps to ensure that the two projects are compatible and adjacent street uses do not conflict.

EOEA #7111

The proponent should do traffic analysis for the affected intersections in the area. The study should include level of service, vehicle delay and vehicle queing by approach. This study should use ITE trip generation rates when projecting vehicle trips from the site for total volume per day as well as a.m. and p.m. peak hour traffic volumes. Included in the DEIR should be an analysis of the truck traffic volume for the study area. The traffic study should look at three options. It should include a Build option, a No-Build option, and a downsizing of the project option.

In view of the heavy traffic congestion in the area and the construction of the Central Artery-Third Harbor Tunnel project the proponent should outline in the DEIR proposals for reducing the number of vehicle trips per day to the site at least until the Artery-Tunnel project is completed. The phasing of this project is unclear. The EIR should describe the timing of any parking proposed for this site vis-a-vis the timing of the Artery-Tunnel project.

Considering the proximity of the Andrew Square station, the proponent should outline measures to encourage use of the MBTA transit. This should include, but not be limited to, shuttle buses from the station to the site and a pass subsidy program. In addition CARAVAN should be contacted. Because of the large size of the project and the traffic congestion in the area, the proponent should designate a full time staff member as the transportation coordinator. This person would be available to answer question and help implement new commuter services.

Finally, the proponent should be advised that the development site is former railroad property. This parcel is therefore subject to Massachusetts General Law, Chapter 40, Section 54A which requires that permission to build must be obtained from the Exective Office of Transportation and Construction (EOTC). Given the proximity of this site to the Central Artery and anticipated transportation needs in this area, the proponent should submit application to EOTC for review and processing to determine if permission to build will be granted.

07/18/88



The Commonwealth of Massachusetts
Executive Office of Transportation & Construction
Office of the Secretary

10 Park Plaza, Room 3510

Boston, MA 02116-3969

Telephone 973-7000

VED

Michael S. Dukakis
Governor

Frederick P. Salvucci
Secretary

and
M.B.T.A. Chairman

EOEA # 7111

DATE: MAY 6, 1988

DATE RECEIVED E.O.T.C. MAY 6, 1988

COMMENTS DUE: 2/1

PROJECT PROPONENT: CONGRESS GROUP VENTURES, INC.

ONE MEMORIAL DRIVE

CAMBRIDGE, MASSACHUSETTS

PROJECT DESCRIPTION: BOSTON, MASSACHUSETTS: BOSTON SCIENCE CENTER, SOUTHAMPTON STREET, BOSTON, MASSACHUSETTS: The proposed is the construction of a five (5) story biomedical research facility containing approximately 475,000 S.F. of research space and structured below grade parking for 565 vehicles. The project will also include driveways, exterior lighting, landscaping and other site improvements.

MDPW - Curb cut permit (relocation of existing curb cut)

COMMENTS ON PROPOSED PROJECT:

[] NO COMMENTS

[X] COMMENTS: See attached

DATE: 6/7/88

for Lori A. Stearns
FREDERICK P. SALVUCCI
SECRETARY



Metropolitan Area Planning Council

110 Tremont Street Boston, Massachusetts 02108 (617)-451-2770

Serving 101 Cities & Towns in Metropolitan Boston

May 26, 1988

The Honorable James S. Hoyte, Secretary
Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

RECEIVED

Project Identification

Project Name: Boston Science Center

EOEA#: 7111

Project Proponent: Congress Group Ventures, Inc.

MAPC#: ENF-88-133

Location: Boston

Received:

Dear Secretary Hoyte:

In accordance with the provisions of Chapter 30, Section 62, of the Massachusetts General Laws, the Council has reviewed the Environmental Notification Form identified above and offers the following comments:

1. ☐ Environmental Notification Form adequate; no Environmental Impact Report should be required.
2. ☒ Before a determination can be made as to whether or not an Environmental Impact Report should be required, additional information should be provided on (X) probable environmental impacts, (X) alternatives to proposed action, and/or (X) measures proposed to mitigate probable impacts.
3. ☐ An Environmental Impact Report (X) should be required, () is categorically required.
4. ☒ Additional comments are attached.

Sincerely,

David C. Soule
Executive Director

DCS/ KH/cap

CC: Commissioner Richard Dimino, Boston
Paul Reavis, BRA
Congress Group Ventures, Inc.
Katy Hax, MAPC staff

The square footage calculations and the proposed number of average trips are precariously close to the MEPA Regulation thresholds, specifically 11.25 #15 and 11.25 #19 respectively. Given the fact that the numbers ARE so close, and that the number of trips in downtown Boston will be increased significantly, air quality and transportation studies should be conducted.

There is also nothing in the ENF stating that hazardous chemicals and materials would not be used on site. Due to the possibility that the future tenant would process and/or utilize hazardous chemicals, perhaps an EIR should be filed after a tenant has been selected to ensure that both the development and the tenant are consistently in full compliance. It appears from the ENF that the developer has currently submitted, however, that the proposed development alone creates enough of an impact to require an EIR.



Metropolitan Area Planning Council

110 Tremont Street Boston, Massachusetts 02108 (617) 451-2770

Serving 101 Cities & Towns in Metropolitan Boston

July 13, 1988

The Honorable James S. Hoyte, Secretary
Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

RECEIVED

JUL 15 1988

SECRETARY OF ENVIRONMENTAL AFFAIRS

Project Identification

Project Name: Boston Science Center

EOEA#: 7111

Project Proponent: Southmed Lt. Partnership

MAPC#: ENF-89-133

Location: Boston

Received: 5-31-88

Dear Secretary Hoyte:

In accordance with the provisions of Chapter 30, Section 62, of the Massachusetts General Laws, the Council has reviewed the Environmental Notification Form identified above and offers the following comments:

1. ☒ Environmental Notification Form adequate; no Environmental Impact Report should be required.
2. ☐ Before a determination can be made as to whether or not an Environmental Impact Report should be required, additional information should be provided on () probable environmental impacts, () alternatives to proposed action, and/or () measures proposed to mitigate probable impacts.
3. ☐ An Environmental Impact Report () should be required, () is categorically required.
4. ☐ Additional comments are attached.

Sincerely,

David C. Soule
Executive Director

DCS/ KH/lab

cc: Southmed Ltd. Partnership
Commissioner Richard Dimino, Boston
Paul Reavis, DRA
Katy Hax, MAPC Staff

APPENDIX C: DISTRIBUTION LIST

BOSTON SCIENCE CENTER/SA #8587

DISTRIBUTION LIST

Secretary of Environmental Affairs
100 Cambridge Street, 20th Floor
Boston, MA 02202
Attn: MEPA Unit

Stephen Coyle, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Richard A. Dimino, Commissioner
Boston Transportation Department
One City Hall Plaza, Room 721
Boston, MA 02201

Department of Environmental Quality Engineering
One Winter Street
Boston, MA 02108

DEQE
Division of Water Pollution Control
One Winter Street
Boston, MA 02108

DEQE
Division of Air Quality Control
One Winter Street
Boston, MA 02108

DEQE - Div. of Water Pollution Control
Met. Boston/Northeast Regional Office
5 Commonwealth Avenue
Woburn, MA 01801

Air Quality Section Chief
DEQE - DAQC
Met. Boston/Northeast Region Office
5 Commonwealth Avenue
Woburn, MA 01801

Metropolitan Area Planning Council
110 Tremont Street
Boston, MA 02108

DPW - District 8
400 D. Street
Boston, MA 02210

Massachusetts Water Resources Authority
100 First Avenue
Charlestown Navy Yard
Boston, MA 02129

Executive Office of Transportation & Construction
10 Park Plaza, Room 3510
Boston, MA 02116-3969

Department of Public Works
10 Park Plaza - Room 4260
Boston, MA 02202

Executive Office of Communities & Development
State Clearinghouse
100 Cambridge Street, Room 904
Boston, MA 02202

Boston Water and Sewer Commission
425 Summer Street
Boston, MA 02210

Marilyn Swartz-Lloyd, Director
Economic Development and
Industrial Commission
38 Chauncy Street
Boston, MA 02111

Lorraine Downey
Boston Environment Department
One City Hall Plaza
Boston, MA 02201

APPENDIX D: TECHNICAL DATA

Meetings Held with Interested Parties:

Public meeting with the following community groups at Victoria Restaurant on October 27, 1988:

- * South Boston Residents' Group
- * Andrew Square Civic Association
- * South Boston Citizens' Association
- * Mayor's Office of Neighborhood Services
- * Worcester Square Area Neighborhood
- * EDIC, Boston
- * South Boston Board of Trade
- * Columbia-Savin Hill Civic Association
- * Dudley Street Neighborhood Initiative
- * Boston Redevelopment Authority
- * Pompeii/Chesterton Neighborhood Association
- * Union Park Neighborhood Association

Meeting of the Worcester Square Association
November 29, 1988

Meeting of the Columbia-Savin Hill Association
December 5, 1988

Meeting of the South Boston Residents' Group
December 12, 1988

Meeting of the Dudley Street Neighborhood Initiative
January 9, 1989

Meeting of the Newmarket Business Association
February 15, 1989

Public Meeting with representatives from the following community groups at Victoria Restaurant on April 10, 1989:

- * South Boston Residents' Group
- * Andrew Square Civic Association
- * South Boston Citizens' Association
- * Mayor's Office of Neighborhood Services
- * South Boston Board of Trade
- * Columbia-Savin Hill Civic Association
- * Dudley Street Neighborhood Initiative
- * Boston Redevelopment Authority
- * Tri-Angle Civic Association

In addition, each of the agencies which commented on the ENF and PNF were met with individually during the months of October and November, 1988. Many of the agencies, which commented on the DEIR/DPIR were contacted and/or met with during the months of March and April.

(1) Use ITEM: ARTICLE 8 - 7 (24) and (48)

(2) DIMENSIONAL REQUIREMENTS: ARTICLE 13-1

	ARTICLE AND SECTION	14-1	14-2	14-1 PLUS 14-2	14-3 14-4	ART 15	ART 16	ART 17	ART 18	ART 19	ART 20	ART 21	ART 22
		MIN. LOT SIZE	MIN. LOT AREA FOR ADJUT. DWELLING UNIT	TOTAL LOT SIZE	MIN. LOT WIDTH	MAX. FLOOR AREA RATIO	MAX. HEIGHT OF BUILD.	USABLE OPEN SPACE PER DWELL. UNIT	MIN. FRONT YARD	MIN. SIDE YARD	MIN. REAR YARD	MIN. SETBACK OF PARAPET	MAX. USE OF REAR YARD
ZONE	Requ'd by CODE	NONE	-	NONE	NONE	2.0	NONE	-	NONE	NONE	12'	See Attached	-
	EXISTING CONDITION	237,339	-	237,339	685	-	-	-	-	-	-	-	-
	PROPOSED CONDITION	237,339	-	237,339	685	2.58	-	-	24	70	49	See Attached	-

GROSS FLOOR AREA: SECTION 2-1(21) F.A.R. = $\frac{\text{Gross Floor Area}}{\text{Lot Area}} = \frac{612,090}{237,339} = 2.58$

Basement --
First Floor -- See Attached
Second Floor --
Third Floor --

Total --

(3) OFF-STREET PARKING: ARTICLE 23

Dwelling Units X factor = spaces (for houses, apartments, hotels, etc.)
or Floor Area/factor = spaces (for offices, stores, factories, etc.) 612,090 g.f.a. = 613 spaces required
626 to be provided

(4) OFF-STREET LOADING: ARTICLE 24 - 6 loading bays required and provided
(only required for uses other than 1 through 10, 26, 27, 28, 31, 32, 33, 39, 40, 50, 52, 53, 58, 59)

NOTE: All of above data is to be attached to, or incorporated into, the Plot Plan Signed by Certified Land Surveyor or Certified Engineer

BOSTON SCIENCE CENTER
301 SOUTHAMPTON STREET
ZONING COMPUTATION

I. F.A.R. CALCULATIONS

Allowable Gross Floor Area:

Lot Area = 237,339 S.F.
Allowable F.A.R. = 2.0
Requested F.A.R. = 2.58
Total Allowable Gross Floor Area = 474,678 S.F.
Total Proposed Gross Floor Area = 758,715 S.F.
Total Proposed Gross Floor Area for F.A.R. Purposes = 612,090 S.F.

FLOOR LEVEL	BLDG. A GROSS FLOOR AREA	BLDG. B GROSS FLOOR AREA	TOTAL GROSS FLOOR AREA	GROSS FLOOR AREA FOR FAR
P-B	*	3,850*	3,850*	3,850
P-1	48,300	48,800	97,100	22,000***
P-2	35,550	35,975	71,525	***
1	52,795	47,400	100,195	100,195
2	50,520	45,125	95,645	95,645
3	51,145	46,575	97,720	97,720
4	51,145	46,575	97,720	97,720
5	51,145	43,400	94,545	94,545
6	51,145	**	51,145	51,145
7	49,270	-	49,270	49,270
8	**	-	-	
	441,015	317,700	758,715	612,090

* Parking Level Below Grade

** Mechanical Equipment Penthouse

*** Excludes space devoted to required accessory parking

NOTE: P-B parking level is below grade and parking in that level is excluded from the definition of gross floor area.
P-1 and P-2 parking levels will contain required accessory off-street parking spaces to serve the main use and therefore the portions of these levels devoted to such parking are excluded from the calculation of floor area ratio under Section 15-1

II. REQUIRED PARKING

As per Section 23-3 of Boston Zoning Code, 1 car space per 1,000 gross floor area will be required.

Total Spaces Required	= 613 cars
Parking on P-B	= 244 cars
Parking on P1	= 197 cars
Parking on P2	= <u>185 cars</u>
Total Spaces Provided	- 626

III. LOADING BAYS

Maximum Bays Specified by Zoning Code	= 6
Number of Loading Bays Provided	= 6

IV. REAR YARD

As per Table B Section 13-1, minimum of 12 feet of rear yard required. Actual rear yard provided is 49 feet.

V. FRONT AND SIDE YARDS

Not Required

VI. PARAPET SET BACK REQUIREMENTS H+L1 (as per Table B of Section 13-1) 6

(1) Front Lot Line Parapet Setback Requirements

NOTE 1 Combined height of first and second story of the building is greater than 25 feet. As per Article 21-2(a) of the Boston Zoning Code, the height below which no setback from the front line will be required is 25 feet.

NOTE 2 Front lot line abuts Southampton Street and Southampton Service Road, combined width of which is greater than 100 feet. As per Article 21-1 of the Boston Zoning Code, the required setback from the front lot line can, therefore, be reduced by 50 feet.

Building A

Wall within 45 of parallel to front line at the height of 116 feet above the grade:

Length of wall measured parallel to lot line at the greatest length of above the height of 25 feet (L1) -
= 170 feet

Wall height = 116 feet
H = 116-25 = 91 feet (as per Note 1)
Setback = $\frac{170 + 91}{6}$ = 43.5 feet

Required Setback = 43.5 - 50 = -6.5 (as per Note 2)

As per the above calculation, no setback will be required for this wall. Actual setback provided for this wall is no less than 24 feet at any point from front lot line.

Building B

Wall parallel to front line at the height of 88 feet above the grade:

Length of wall parallel to lot line, measured at greatest length above the height of 25 feet (L1) = 125 feet

Wall height = 88 feet
H = 88-25 = 63 feet (as per Note 1)

Setback = $\frac{125 + 63}{6}$ = 31.3 feet

Required Setback = 31.3 - 50 = -18.7 (as per Note 2)

As per the above calculation, no setback will be required for this wall. Actual setback provided for this wall is 24 feet from front lot line.

(2) Rear Lot Line Parapet Setback Requirements:

NOTE 1 Combined height of first and second story of the building is greater than 25 feet. As per Article 21-2a of the Boston Zoning Code, the height below which no setback from the rear lot line will be required is 25 feet.

Building A

Wall parallel to rear lot line, measured at greatest length above the height of 25 feet (L1) = 200 feet

Wall height = 116 feet
H = 116-25 = 91 feet (as per Note 1)

Setback = $\frac{200 + 91}{6}$ = 48.5 feet

As per the above calculation, the required setback from the rear lot line for this wall is 48.5 feet. Actual setback provided for this wall is 49 feet from the rear lot line.

Building B

Wall parallel to rear lot line at the height of 88 feet above the grade:

Length of wall parallel to lot line, measured at greatest length above the height of 25 feet (L1) = 185 feet

Wall height = 88 feet
H = 88-25 = 63 feet (as per Note 1)

Setback = $\frac{185 + 63}{6}$ = 41.3 feet

As per the above calculation, the required setback from the rear lot line for this wall is 41.3 feet. Actual setback provided for this wall is 49 feet from rear lot line.

(3) Side Lot Line Parapet Setback Requirements:

Note 1 As per Article 21-2b of the Boston Zoning Code, no setback from below height of 60 feet is required where maximum floor area as stated in Table B of Section 13-1 is 2.0.

Building A

Wall within 45 parallel to side lot line at the height of 172 feet above the grade:

Length of wall measured parallel to lot line at greatest length above the height of 60 feet (L1) = 95 feet

Wall height = 172 feet
H = 172-60 = 112 feet (as per Note 1)

Setback = $\frac{95 + 112}{6}$ = 34.5 feet

As per the above calculation, the required average setback from the side line for this wall is 34.5 feet. Actual setback for this wall is no less than 80 feet at any point from the side lot line.

Building B

Wall parallel to side lot line at the height of 88 feet above the grade:

Length of wall parallel to lot line, measured at greatest length
above the height of 60 feet (L1) = 95 feet

Wall height = 88 feet
H = 88-60 = 28 feet (as per Note 1)

Setback = $\frac{95 + 28}{6}$ = 20.5 feet

As per the above calculation, the required setback from the side
line for this wall is 20.5 feet. Actual setback provided for
this wall is not less than 75 feet from side lot line.

NOTE - For the purposes of determining the maximum setbacks from
all lot lines in the preceding calculations, lengths of
walls (L1) as well as heights (H) have been maximized to
ensure that all other varying lengths and heights of walls
will satisfy the minimum requirements.

Southampton Street

Southampton FRONT LOT LINE

Service

FRONT LOT LINE
(WITHIN 45°)

L = 170' H = 116'

A

L = 125' H = 88'

B

L = 95' H = 172'

L = 200' H = 116'

L = 185' H = 88'

L = 95' H = 88'

REAR LOT LINE

KEY PLAN

PARAPET SET BACK LOCATIONS
FOR ZONING COMPUTATION

BOSTON SCIENCE CENTER
CONGRESS GROUP VENTURES

CANNON/YAN

MARCH 21, 1989.

Table 20 - Predicted CO Concentrations (PPM)

Receptor Distance (km)	Source	1988	1988	1991	1991
		Peak 1-hr	Peak 8-hr	Peak 1-hr	Peak 8-hr
0.006	at grade*	2.66	0.49	2.21	0.41
	underground#	5.24	0.97	4.35	0.80
	background	5.00	3.00	5.00	3.00
	total	12.89	4.46	11.56	4.22
0.1	at grade*	1.09	0.20	0.90	0.17
	underground#	4.50	0.84	3.75	0.69
	background	5.00	3.00	5.00	3.00
	total	10.60	4.04	9.65	3.86
0.5	at grade*	0.21	0.04	0.17	0.03
	underground#	0.73	0.14	0.61	0.11
	background	5.00	3.00	5.00	3.00
	total	5.94	3.18	5.78	3.14

* = Level P-1 at grade parking level

= Level P-2 underground parking level



Boston Gas Company
201 Rivermoor Street
Boston, Massachusetts 02132
Telephone (617) 323-9210

Cosentini Associates
44 Brattle Street
Cambridge, MA 02138
Attn: Frank Teebagy

April 5, 1989

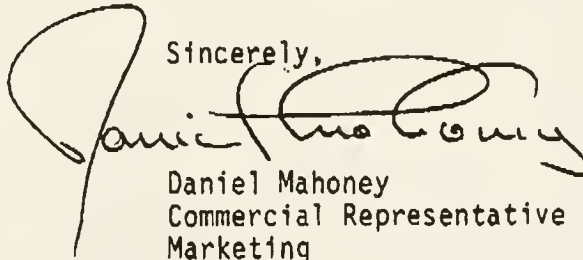
Dear Frank:

In reply to your letter of March 17, 1989, requesting the availability of 72,600 MCFH of natural gas for the two new buildings at 301 South Hampton Street, Roxbury. The gas is available at a pressure of 4" w.c. If booster will be used, specs of same will be needed for approval.

Enclosed are a few brochures on Gas Air Conditioning and Cogeneration, which may be of some help to you in planning these two buildings or any others in the future.

If you have any questions, please do not hesitate to call me.


Sincerely,



Daniel Mahoney
Commercial Representative
Marketing

DM/mgo

Enclosure


BOSTON EDISON
800 Boylston Street
Boston, Massachusetts 02199

RECEIVED

NOV 02 1988

COBIN, INC.

October 31, 1988

Mr. Randy Duke
Cosentini Associates
44 Brattle Street
Cambridge, MA 02138

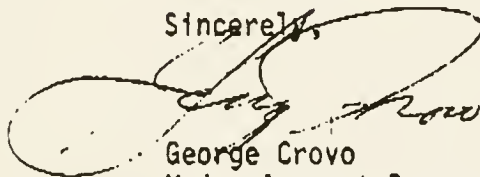
RE: Boston Science Center
301 Southamptn Street
Roxbury

Dear Mr. Duke:

Please be advised Boston Edison Company has adequate electric capacity to meet the needs of the proposed Boston Science Center.

Please contact me at 424-2277 if you have further questions.

Sincerely,



George Crovo
Major Account Representative
Energy Services Department

cd

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4053 19

BOSTON PUBLIC LIBRARY



3 9999 06315 752 1

